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THE THIRD PLAN

(1965-70)

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HIS MAJESTY'S GOVERNMENT
MINISTRY OF ECONOMIC PLANNING
NEPAL

7057
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Price Rs.

H.M. The King of Nepal
Principal Private Secretariat

Royal Palace
Nepal.

September 16, 1965

Message from His Majesty the King

It is well known to all the Nepalese that the Three Year Plan, adopted by my government after the advent of Panchayat System, which has achieved a great deal of success, is the result of the active participation of my beloved countrymen in the development activities instead of engaging in the political vilification. It would be no exaggeration to say that the progress achieved under this system and the enthusiasm displayed by the Nepalese even at the juncture when the country is just to march on the path of progress is the symptom of rapidity in the future progress of Nepal. Hence, instead of being contented with the present achievement, it has become the duty of all of us to try to enhance forward, keeping in mind, still more, the works to be done with a view to bringing reform in the present situation of all the Nepalese. This is not the time, either to rely upon others or to assume that the responsibility of nation building lies on the shoulder of the government. In fact, the responsibility to make the brighter prospects of the country and its future generations rests on the shoulders of each and every citizen of Nepal to-day.

The Third (Five Year) Plan has been implemented by my government under the policy of planned development for raising the economic standard of the country and bringing rapidity in the pace of development. This present plan has been aimed at increasing the national income into double within the period of 15 years.

I am fully confident that the various tiers of Panchayat, Class Organisations and all the people in common by regarding the success of this Plan as the greatest challenge to be faced by our nation (for the nation's sake) will try to have utmost effort and co-operation in order to step forward shoulder to shoulder with my government.

(Unofficial Translation)

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Preface

The present Plan is the third in the series of our efforts at planning for economic development. It is the second of the two Plans that have been issued after the historic step of 1961. The Plan prior to this had only a limited objective. The main objective of the Three Year Plan was to lay down the basis condition required for the formulation and implementation of a more comprehensive plan in future aiming at faster growth in future. Accordingly emphasis was laid upon improvements in organization, collection of statistics, survey and training. It was further envisaged in the Plan to re-organize and consolidate the existing facilities and to complete the projects already underway. From the progress achieved in the implementation of the Three Year Plan it is clear that these objectives have been fulfilled to a large extent. During the past three years our capacity to utilize available resources has increased considerably. This has encouraged us to launch a still higher and more comprehensive plan. The Third Plan which is of five years' duration is the result.

In order to provide the basis for this Plan, "A Brief Outline of the Third Plan" was brought into publication some months back. This Plan does not differ much from the "Outline" in its policies, objectives and priorities ; but the total outlay of the plan has been increased, keeping in view the increase in the availability of resources as well as our increased capacity to utilize the resources. Moreover, the targets in different sectors have also been revised on the basis of the detailed programmes.

It is not an easy task to formulate a nationwide plan with the limited information that we have on various sectors of the economy. It is, therefore, natural to come across shortcomings in the Plan. This should be borne in mind when one goes through this Plan. No effort will be spared to remove such shortcomings in future.

But the preparation of plan is just the beginning, not an end *per se*. The success of the Plan depends on the active cooperation and hard work of the peasants, youths, industrial labourers, government servants, social workers and all the able citizens of the country. Given the cooperation of all concerned the successful implementation of the plan is assured. We lag far behind other countries in economic development. We have to work harder than ever before in order to accelerate the pace of our development. It is my appeal, therefore, to all the intellectuals and the workers of the country to extend their active cooperation in the execution of this Plan.

I like to extend my grateful thanks to all the friendly nations and international organisations that have provided financial, technical and other assistance for our country's development. All the experts and officials who have helped in preparing this Plan deserve our thanks.

SOORYA BAHADUR THAPA

Chairman,

September 17, 1965

National Planning Council

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PART I

GENERAL

PART I

CHAPTER I

Present Economic Conditions

The history of planned process of economic development in Nepal is short. Before 1951, some development activities were undertaken but their scope was very limited. Among them were limited programmes to develop power and drinking water facilities in Kathmandu, health programmes in a few districts, some schools, a college, a commercial bank, a few roads and some small-scale irrigation works. The abolition of slavery in 1925 was the most significant social measure. But as a result of various political and geographic conditions, Nepal remained isolated behind other countries in its social and economic development. However, the economic stimulus of World War II led to the establishment of the first modern industrial units in Nepal. Many of these failed to survive the immediate post-war period because of poor management and lack of technical knowledge. Only very recently attention has been given to feasibility studies and the other prerequisites of sound industrial development.

Even after the political changes of 1951-52 relatively little progress was made. The difficulties of changing the political and administrative structure were largely responsible.

First Five Year Plan (First Plan)

Serious efforts to plan economic development took place after the establishment of a Planning Board in 1955. The First Five Year Plan, prepared by the Board, covered the 1956-61 period.

Because of the Board's limited knowledge and experience, there were serious shortcomings in the Plan itself. Despite this, some significant results were achieved, although expenditures were only Rs 210 millions, or Rs 42 million annually. Little progress occurred in road, power, and industrial development. But the Plan did stimulate public interest in, and support of planning. Government was made aware of the requirement for planned development. There was significant progress in the fields of education and health. Overall, however, the plan made little headway creating the necessary base for economic development.

The Three Year Plan (Second Plan)

A significant result of the First Plan was the recognition of the conditions required for successful planning and project implementation. It was realized that a plan formulated without detailed knowledge of actual conditions and the development potential of the several sectors was of limited usefulness. A plan must, moreover, take full account of administrative relationships and the limited financial and other resources available.

At the time the Second Plan was perpared, knowledge of economic conditions in Nepal was still extremely limited. In the absence of survey and studies of natural resources, agricultural output national income and other economic variables, existing economic conditions could not be accurately ascertained. It was not possible, therefore, to set overall targets and goals in quantitative terms. The absence in data also prevented the formulation of a long range perspective planning within which the Second Plan was to operate. Recognising these limitations, Second Plan Sectoral targets were fixed in terms of Nepal's ability to finance and implement the development programme.

Because of the existing shortcomings, the Second Plan gave priority to activities which would establish the base for more comprehensive future plans. Emphasis was given to the collection of data on economic conditions, organisational reform and improvement, and the development of the economic infrastructure. Priority was given to survey and statistical activities, agricultural reform, organisational improvement and training. The other areas given emphasis were transport and communications, power, and in agriculture, agricultural extension work and irrigation. In the industrial sector, emphasis was placed on the completion of projects already underway. For social services, efforts were directed more at the improvement than the expansion of schools and health centres. For the implementation of the programmes under the above mentioned priority scale, an outlay of Rs. 600 million was programmed. An additional Rs 70 million were to be made available as loans to the private sector for investment in agriculture and industry.

Three Year Plan Progress

During the Second Plan, the progress made was significant from the point of view of rapid economic development. The planned outlay in the public sector was virtually achieved. Table 1 gives the financial allocations and actual expenditures during the Second Plan.

Table 1. Planned and Actual Expenditures 1962-65

Activity	*Plan Target (Million Rupees)*	*Expenditures (Million Rupees)*
Reform, Survey and Statistics Publicity and Training	*79.20*	*51.82*
Land Reform and Administration of	2.50	3.77
Cadastral Survey	10.00	7.57
Agricultural Credit	3.00	—
Administrative Reform	5.00	.73
Panchayat	20.00	31.28[1]
Survey and Statistics	23.00	2.76[2]
Training	12.00	1.48[3]
Publicity	3.20	4.23
Transport, Communication and Power	*234.50*	*230.86*
Roads	112.50	63.41[4]
Aviation	25.00	22.80
Postal and Communications	6.00	7.32
Power	91.00	137.33
Agriculture, Irrigation and Forests	*81.60*	*87.31*
Irrigation	40.00	50.25
Agriculture	28.20	22.46
Forestry and Botany	13.40	14.60
Industry and Tourism	*102.00*	*103.69*
Industry	90.00	93.62[5]
Cottage Industry	10.00	9.27
Tourism	2.00	.80
Social Welfare	*102.70*	*95.31*
Education	40.00	48.99
Health	37.00	45.82[6]
Drinking Water	24.00	—
Sports	1.70	.50
Miscellaneous	—	*27.82*
Total	600.00	596.81

1. Includes Cooperatives.
2. This covers only hydrological survey. Other surveys are included in departmental totals for the several sections.
3. Accountant, training and engineering college expenditures are included.
4. Includes railway and ropeway.
5. Includes mining.
6. Included in irrigation expenditure.
7. Includes building, planning, [illegible], contingency, and other expenditures.

Out of the Rs 70 million allocated to the private sector, Rs 25 million were used for agricultural resettlement and industrial development loans. In the public sector, the largest amount was spent on power development. Substantial sums were also allotted to industry, roads, and irrigation. These allocations are commensurates to with the priorities established in the original plan.

Table 1 appears to indicate a considerable shortfall in expenditures for survey and training. This is misleading since expenditures on these activities, although separately shown in the target figures, are included in the departmental totals of realized magnitudes. Expenditures incurred for the forest resources and botanical surveys, mineral exploration, surveys of irrigation and power potential and in the transport sector are in the respective departmental totals. The same goes for training expenditures in such fields as agriculture, cooperatives, cadastral survey and the like.

Even in terms of physical objectives the Plan targets have, on the whole, been achieved. The population census, sample agricultural survey, a national income estimate and other statistical and survey activities have provided greater knowledge about the economy.

Development budget expenditures increased annually over the Second Plan period and represents, in monetary terms, improvements made in administrative efficiency and the absorptive capacity of Nepal. In 1962-63, the first year of the plan, Rs 70 million were spent. In the second year, development budget expenditures rose to Rs 147 million. In the final year expenditures were Rs 180 million, excluding projects supported by Indian Aid, which were added in the supplementary budget.

In addition to administrative reforms, land reforms were started during the Second Plan. Their purpose is to modernize agriculture and provide incentives for increasing production. Significant progress has been achieved in industry, transport and power. The present position of the several sectors of the economy is given in the following sections :

Agriculture

Nepal's agricultural output depends very heavily on climatic conditions. During 1963-64, the second year of the Second Plan, whether conditions adversely affected agricultural output. In the first and third years, weather conditions were normal and did not adversely affect production.

It is estimated, however, that agricultural output increased over the plan period as a whole as a result of programmes undertaken by His Majesty's

Government. The expansion of existing processing units and the establishment of new factories have encouraged cash crop production with a resultant increase in output.

Although still far from adequate, the agricultural extension services have had positive effects. These include improved seed, implements, fertilizers and plant protection facilities. Irrigation has also been provided on an additional 100,000 areas. Institutional improvements have also been made. The Agricultural Reorganization and the Cooperative Bank Acts of 1962 were steps in this direction. The Agricultural Reorganization Act was implemented in selected gram panchayats of Jhapa, Palpa and Chitwan districts. The programme surveyed the land holdings, identified the tiller, fixed rents, gave security of tenure to tenants and modernized administrative procedures. Under the Land Reform Act of 1964, efforts are being made to extend the programme to the whole country. The results to date are encouraging. The programme involving cadastral survey, identifications of the tillers and collection of savings has been virtually completed in seven districts. All phases except the cadastral survey have also been undertaken in another nine districts. This programme is designed to give greater incentive to the cultivator to expand output.

Table 2 gives production estimates of selected crops for the years 1961-62 and 1964-65. The data are secured from the Agricultural Census and the the Department of Agriculture.

Table 2. - Agricultural Production, 1961-62 and 1964-65 Compared

Crop	*Annual Production* *1961-62*	*(1,000 Metric Tons)* *1964-65*	*Per Cent Increase*
Paddy	2,102	2,201	4.7
Wheat	137	152	10.9
Maize	843	855	1.4
Millet	63	63	0.0
Sugarcane	93	126	35.4
Tobacco	9	9	0.0
Jute	34	39	74.7
Oil Seeds	48	51	6.2

Industry

Significant progress in the industrial sector has been achieved during the Three Year Plan. With the establishment of new units and the modernization and expansion of existing plants, industrial output in selected sectors has increased significantly as shown in Table 3(A).

Table 3(A) Industrial Output, 1960-61 and 1964-65, Compared

Production	*Unit*	*1960-61*	*1964-65*[1]	*Per Cent Increase*
Processed Jute	m. tons	15,140	19,075	25.9
Sugar	"	1836	7245	294.0
Cigarettes	lakh sticks	2,498	4137	66.2
Matches	Gross	3,05,700	3,70,923	21.3

Table 3(A) does not give a full picture of recent industrial development. As a result of the increased attention given by Government and of the assistance provided by the Nepal Industrial Development Corporation, a variety of new production units have been established. Among these are plants manufacturing cotton and woolen textiles, iron products, and utensils. A leather and shoe factory has also been established in the public sector.

The growing industrial activities in Nepal can be well realized by the growing number of industrial firms during the past few years, which is shown in the table 3(B) below.

Table 3 (B)

Number of Industrial Firms[1]

	Year	*No.*
Up to	1961	459
	1962	740
	1963	844
	1964	973
	1965	1330

Source : CBS.

Transport and Communication

Transport and communication difficulties have been major obstacles to the rapid economic development of Nepal. Although progress was made during the Second Plan, further expansion is essential to bring modern transport facilities to most areas of Nepal. The Raxaul-Bhainse and the Kathmandu-Kodari roads have been major road construction programmes. Work was started on the East-West Highway and the Sunauli-Pokhara road.

In the aviation sector, the Gaucher cross runway will be finished in the first year of the Third Plan. Improvement work is also underway on other airports. In telecommunications, seven areas control stations and

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1. Based on the industrial survey of 1965.

50 satellite stations have been established. A new radio link was initiated between New Delhi and Kathmandu. In addition to increasing internal postal services, international parcel and insurance services were also started.

Power

Work on power development has moved slower than planned but, in the light of the difficulties faced, quite satisfactorily. Difficulties in transporting machinery and equipment and periodic labour shortages have delayed work. By the end of 1965, 7,600 k.w. of new generation facilities will be operative. This includes 3,000 at Trisuli, 2,400 k.w. at Panauti, 2,000 k.w. at Birgunj and Patan, and 200 k.w. at Dharan. In addition, 10,000 k.w. will become available in 1966 from Trisuli and Hetauda.

Education

There has been considerable progress in the field of education. There were 13 colleges, 85 high schools, 300 secondary and 1,200 primary schools at the beginning of the First Plan. During the First Plan, the number of primary schools rose to over 4,000 and enrollment increased to nearly 200,000. The number of secondary schools rose to 500. Multi-purpose high schools were also established. Colleges increased to 31 in number and the only university in Nepal was established. Teacher training and adult education programmes were started.

During the Second Plan, emphasis was placed upon improving rather than expanding educational facilities. The number of primary students increased from 190,000 to 346,000. The proportion of school age children receiving primary education rose from 15.3 per cent to 27 per cent. Secondary schools increased from 500 to 660 and the number of secondary school students was approximately 40,000 by the end of the Plan. The adult education programme was expanded and the one hundred thousand students have been enrolled to date.

The Population Census of 1952-54 revealed a 4.4 per cent literacy rate in Nepal. The Census of 1961-62 showed an increase in the literacy rate to 8.9 per cent. There has undoubtedly been a further rise since that time.

Health

Health facilities in Nepal fall below the standards of most countries in the world. Considerable progress has, however, been made. At present 42 government hospitals with some 1,000 beds are available. In addition, health centres and health posts have been established in the villages to provide facilities for as many people as possible.

Malaria eradication work has been completed in the central zone of Nepal in which 2,400,000 persons reside. Eradication work is underway in the eastern zone covering 1,300,000 persons. Smallpox and leprosy control programmes have been started. The maternity and child care programme has been explained. Efforts have been made to improve sanitary conditions.

International Resources

In the last few years, there has been considerable progress in the mobilization of international resources. Governmental revenue which were Rs 90 million in 1961-62 had increased to Rs 158 million by 1964-65. Because of the expansion of industrial activity and higher income levels, income from customs and excise taxes rose considerably. Receipts from land revenue rose with an upward adjustment of tax rates. Direct taxes have also been imposed and the receipts are rising. The establishment of new government corporations and better management of existing units have added to the dividend income of government.

As a result of this striking expansion of governmental receipts, more internal resources have been made available for the development budget. Only a few years ago, Nepal's development budget was almost wholly dependent on foreign aid. During the First Plan, Nepal's dependence on foreign assistance increased. In 1958-59, 29 per cent of the public sector development expenditures were internally financed. This ratio fell to six per cent in 1960-61. In the Second Plan period, this trend was reversed. The Plan called for financing Rs 670 million of which 110 million or 17 per cent of proposed expenditures were to be met by the internal resources. The actual contribution amounted to 24 per cent of the total.

Trade

During the Second Plan, efforts were made to diversify trade. It is not possible to measure the success of these efforts since the required data for recent years are not yet available. Some indication of the trend can be secured, however, from comparisons of available data on past years.

In 1957-58, exports were reported at Rs 70 million. In 1960-61, recorded exports were some Rs 210 million and rose to Rs 265.2 million in 1961-62.[1] Imports during this period rose rapidly as a result of increased incomes and an expansion of developmental activities. In 1957-58, imports were recorded at Rs 160 million and by 1960-61 they had increased to Rs 400 million. In 1961-62, they rose further to Rs 440 million. Although the trade is still predominantly with India, trade with other countries is gradually increasing. Table 4 gives export-import data based on licences issued by the Commerce Department for the 1961-64 period. This covers only trade with overseas countries.

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[1] The export figures do not measure actual exports since raw jute, timber, leather and other products which did not have to pay an export tax were not recorded. In addition, taxable commodities were, to some extent, smuggled across the border and thus not recorded. The Central Bureau of Statistics estimates the exports of 1961-62 at Rs. 400.0 million instead of the recorded Rs. 265 million.

Table 4. Licence Value of Exports and Imports, 1961-64.
(*In Million of Rupees*)[1]

		1961-62	*1962-63*	*1963-64*
Imports	Rs	66.5	76.8	71.2
Exports	Rs	11.8	19.8	22.4

The volume of tourist traffic to Nepal has been increasing steadily. In 1958, 2,756 tourists visited Nepal. By 1963, the number had increased to 7,750. During 1964 there was a further increase to 9,976. Further expansion is possible as airline and hotel facilities become more adequate. The earnings from tourism are expected to rise rapidly in the future.

Conclusion :

The above facts indicate the achievements of the Second Plan. Although Nepal underwent a revolutionary political change in 1951, it has been only very recently that the tempo of economic activity has expanded significantly. The Nepalese economy is still in a very early stage of development. Gross domestic product in 1961-62 is estimated at Rs 3,680 million. For 1964-65, the value of output has been tentatively put at Rs 5,280 million. This gives an increase of 43 per cent over the three year period most of which reflects price rather than output increases. Accordingly, per capita income is estimated at Rs 570 ([illegible]). This is below the per capita incomes of India, Pakistan and Ceylon which, in 1963, were estimated at $73, $74 and $137 respectively. In the United States, at the other extreme, per capita income is over $2,500.

Ninety-three per cent of the population of Nepal is dependent on agriculture which contributes 65 per cent of gross domestic product. Because of primitive cultivation techniques, yields per acre are very low. The industrial sector is just getting started and contributes a small fraction of total output. Its activities are confined mostly to processing agricultural products. Transport, communication and power facilities are inadequate to meet Nepal's needs. The literacy rate is among the lowest in the world and life expectancy at birth is 32 years.

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[1] These are licence rather than actual values. Actual figures are undoubtedly smaller.

The low income level of Nepal indicates that savings are also very small. This limits the volume of investments which can be financed internally and makes it even more imperative that the limited resources be used productively for the benefit of the nation.

CHAPTER II

Objectives and Priorities

As mentioned earlier, income levels in Nepal are among the lowest in the world. The task facing the nation is to improve the economic condition of its citizens as rapidly as possible. Nepal must accomplish the task within a few decades what other nations have taken a much longer period to achieve. As His Majesty has stated, "If we want to raise Nepal to the level of other developed countries, we have to accomplish in 10 or 20 years what they took centuries to do." To achieve this accelerated development, available resources particularly human, must be fully and effectively utilized. To ensure full mobilization of these resources, Nepal has adopted the method of planned economic development. The effectiveness of planning as a means of stimulating development has been demonstrated in other countries as well as Nepal.

Social Objectives

The social objectives of the Third Plan have their origin in the planning process begun in 1956, and are defined within the framework of the guidelines set forth in the Constitution of Nepal:

(1) The aim of the State shall be to promote the welfare of the people by securing and protecting a just social order which brings about harmony in the national life by integrating and consolidating the interests of different classes and professions from a comprehensive national outlook.

(2) Towards the fulfilment of the objectives laid down in clause (1) such policy, in particular, shall be followed as a result of which—

(a) all citizens may have equal opportunity and facility to develop their personality and to make economic progress ;

(b) citizens may have reasonable and adequate means of livelihood ; and

(c) the ownership and control of the material resources of the community are so regulated as may bring about equitable distribution of wealth and as may best subserve the common good, and also afford reasonable protection and encouragement to private enterprise in the allotted sectors of industry and trade.

The above objectives are intended to promote the welfare of the people of Nepal in the process of economic development. To increase total output is not enough. It is also necessary to distribute the output equitably. Although the primary objective must of necessity be to increase productivity and total output, the distribution aspect must also be considered by a nation concerned with the welfare of its citizens.

The Panchayat System and National Development

For rapid economic development the social and political structure must stimulate rather than hinder the growth process. As Nepal's own experience since 1960 has shown, political stability is one necessary condition. In the social field, all citizens should have an opportunity to develop their capacities to the fullest extent and be able to secure gainful and productive employment. To accomplish the desired results, conscription for work and distinctions based upon caste, religion and sex must be eliminated. Education, medical care and employment opportunity must be made available to all.

To achieve the goal of social justice, steps should be taken to eliminate gradually the concentration of wealth in a small group and to reduce the income gap between the few and the many. Care must be taken, however, to ensure that adequate incentives for work and investment are also provided. To accomplish this, new organizations need to be established and operated under necessary rules and regulations.

Political stability, the elimination of socially undesirable systems, and changes in organizational structure are imperative for the success of any development plan. But these alone are not sufficient. There must also be a gradual evolution of the political, social and economic system in response to changing conditions to allow the necessary flexibility while adhering to the basic social objectives. Such a system must be close to the people and responsive to their needs. Its scope should not be restrictive but should cover all aspects of social and economic activities.

The panchayat system is the medium through which the constitutional objectives are to be met. More specifically, the panchayat structure is designed to create the institutional arrangements necessary for the political, social and economic growth of the nation. It will involve the people at all levels of administrative and executive action within the country. In view of the basic objectives, all important activities must be undertaken within the framework of the panchayat system.

His Majesty's Government has committed itself to a decentralization policy which will further strengthen the zonal, district and village panchayats. The Preamble to the Constitution states—

> Whereas it is desirable in the best interest and for the full development of the Kingdom of Nepal and of the Nepalese people to conduct the government of the country in consonance with the popular will, and originating from the very base with the active cooperation of the whole people, it embodies the principles of decentralization.

The panchayat system is not only a framework but also the means for the implementation of the development effort. The success of any nation-wide development plan depends upon the active support and cooperation of the people. The contribution of the panchayat system in mobilizing local resources and labour has also been important.

The Long Run Perspective

In order to plan effectively many countries prepare long term perspective plans covering up to 25 years. Nepal cannot prepare such a long term plan because of the lack of necessary statistical data. In the absence of a long term perspective, the targets of short range programmes such as the five year plan are limited and possibly even conflicting. For example, in the five year plan, the various sectoral programmes must be coordinated. These programmes are, however, a part of a continuing process reflecting past activities as well as future plans. Therefore, long term goals for each sector are essential. These are particularly necessary in such as power, transport and education.

A long term target of doubling national income in fifteen years has been set. This may appear ambitious in terms of past achievements. The target appears feasible, however, on the basis of the experience of other developing nations. To achieve this, national income must increase at an annual rate of 4.7 per cent. In view of the present level of utilization of available resources, such a rate of growth does not appear feasible in the near future. The rate can, however, be expected to raise above it over the fifteen year period.

The rate of population increase for the past few years is estimated at two per cent and is expected to remain at this during the Third Plan. It is estimated to rise to 2.2 per cent in the following five years and then to 2.4 per cent. Based upon this population projection, per capita real income will increase 62 per cent by 1980.

As a result of steps taken during the Second Plan, it is now possible to determine long term targets in some sectors of the economy. The development of transport and power are two basic requirements for economic growth. Roads are the primary means of transport on Nepal. A long term road development programme has been prepared which calls for 2,500 miles of road construction over the next twenty years. Free and compulsory primary education will be provided nationally by 1980 in accordance with UNESCO targets. In some sectors, major projects will taken relative long periods of time to complete. One major hydro-electric project on the Karnali, for example, may take eight to ten years. To coordinate these several programmes, a long term perspective plan is needed.

Third Plan Targets

The national income target of the Third Plan is to achieve a total increase of 19 per cent. This will give a nine per cent increase in per capita income over the plan period, assuming a population growth of two per cent per year. This is not ambitious in terms of doubling income over the next plan periods, but it does appear ambitious in the light of the present absorptive capacity of the economy.

The Plan calls for total expenditure of Rs 2,500 million in public and private sectors. Of this, Rs 500 million will be spent on the private sector, Rs 240 million by district and village panchayats on district and local development activity, as distinguished from public sector expenditures by the central government. During the Second Plan, development expenditures in the public sector averaged Rs 200 million per year as compared with the projected Third Plan average of Rs 350 million. In the last year of the Second Plan, however, expenditures in the public sector alone amounted to Rs 260 million. They are expected to rise gradually over the next five years.

Objectives of the Third Plan

The primary objective is to develop the prerequisite for rapid economic growth. The Plan must, however, encompass programmes designed to meet immediate problems as well as those which are essential to future growth. More specific objectives are given below :

Agriculture Production

In order to achieve the target of increasing total output by 19 per cent, agricultural production must rise. The increase can be achieved by introducing modern techniques to replace the existing primitive practices. The experience of India demonstrates that rapid economic growth cannot occur unless agriculture is properly developed. This is particularly important in the case of food production. Unless food production expands, price rise and inflationary pressures become acute.

Institutional Reform

One of the objectives of economic development in Nepal is to move labour out of agriculture into other productive activities. A rapid expansion of agricultural output will enable Nepal to overcome her present dependence on agriculture.

It is necessary not only to increase investment on agriculture but also to expand investment opportunities outside of agriculture. The feudalistic system in the rural areas of Nepal must be brought to an end. The economic condition of the tiller is adversely affected by insecurity of tenure, high rents and high interest rates. A primary objective of the Third Plan, therefore, is to improve the condition of the tiller by effectively implementing the land reform programme.

Economic Infrastructure

It is also essential to develop transportation and power. Their development will increase agricultural output and lead to a more efficient market system. Transport difficulties have been among the primary barriers to development, particularly of the hill region of Nepal. Only the first steps have yet been taken in transport and power development.

Industrial Development

Industrialisation is an essential component of economic growth. However, development of industries requires a reasonable level of agricultural and infrastructure development. The Plan, therefore, aims at developing industries wherever feasible.

Industrial development can occur in both the public and the private sector. In the light of the limited resources available, it is not desirable to restrict the development to one sector. Special efforts will be made in the public sector to ensure the establishment of basic and essential industries. Financial and technical assistance is being made available to stimulate development.

Foreign Trade

International trade occupies an increasingly important role as economic growth and development take place. Associated with the growth is a rising demand for capital goods and raw materials which must be imported. Therefore, Nepal will have to earn and spend more foreign exchange, particularly convertible currencies, in the years ahead.

India is Nepal's primary and predominant trading partner. Nepal's exports are presently limited to a few products. In order to diversify trade, agriculture and industry must be developed to produce additional goods for export. In addition, new markets for Nepal's exports must be developed.

Social Justice

Social justice depends upon the allocation of the benefits of economic growth to large numbers of people. If the benefits are secured only by a small group, the active support and cooperation of the people cannot be secured.

The land reform programme is one major measure designed to improve the economic condition of the people of Nepal. The progressive direct taxes which have been introduced are also designed to distribute benefits more widely. The *Mulki Ain*, a legal code designed to eliminate individual distinctions based upon caste and religious distinctions, was adopted in the Second Plan and will be supported vigorously in the Third Plan.

Social justice covers more than an equitable distribution of income and land ownership. Education, health and other social services also help raise the living condition of the people. The manner in which these measures will be stressed will be outlined in later sections.

To the extent that the panchayat system is effectively utilised, facilities will be made available to the largest number of people. By initiating programmes in all regions, the benefits would also be dispersed geographically. Over-emphasis on equitable income distribution may discourage potential entrepreneurs and restrict the economic growth of the nation. Emphasis must be placed on expanding opportunities for all citizens of Nepal.

Priorities of the Plan

Because of the widespread demands on scarce resources, priorities must be established among the many possible activities. The planning process itself involves a determination of priorities which is affected by existing conditions and the necessity of emphasizing those activities which will most effectively stimulate further development.

Agriculture plays a particularly important role in the initial stages of economic development. It provides the food requirements for industrial workers, the raw materials for industry, and earns foreign exchange with which to buy needed imports. Moreover, in Nepal, ninety per cent of the people are dependent upon agriculture for their livelihood. An agricultural revolution is a necessary condition for rapid growth. To achieve this, not only should modern agricultural techniques be made available but the benefits of increased production should accrue to the cultivator. The Land Reform programme is designed to accomplish the latter goal. But this alone cannot improve the economic condition of the tiller. Production loans, cottage industry development, cooperative credit, marketing societies, and resettlement programmes are also needed. In the light of these considerations, the highest priority has been given to agricultural development.

Agricultural development depends also on the improvement and expansion of marketing facilities. It will be further stimulated by the establishment of industries which process agricultural products. Prices should be stabilized at an incentive level. To achieve this, modern transport and communication facilities are required. Thus, the priority given to agriculture also affects other areas such as transport and industry.

Transport development is another critical areas for economic growth. Efficient transport facilities are needed to move agricultural products to consumers at low cost. These facilities are also needed to integrate the social and economic activities of the nation. Power is also a basic requirement for the development of Nepal. Therefore, these two sectors have also been given high priority.

Next in order of priorities is the development of industry. Industrial expansion depends upon the development of transport and power, and the availability of raw materials and other resources. The limited transport and power facilities presently available make immediate industrial growth difficult to achieve. Industrial development, on the other hand, stimulates the expansion of related supporting activities. In the long term, industrialization is essential, and its development should be given maximum stimulus.

CHAPTER III

Investment Allocation

The Third Plan calls for expenditures of Rs 2,500 million which will increase total gross domestic product by 19 per cent. Plan expenditures by 1969-70 will be some nine per cent of gross domestic product as compared to an estimated six per cent in 1964-65. Total development expenditures are expected to rise from Rs 324 million in the last year of the Second Plan to Rs 600 million by 1969-70.[1]

It should be noted that not all expenditures can be classified as investment. Some expenditures will meet recurring costs—e.g. allocations to education, publicity, broadcasting, malaria eradication, health, and various training programmes. A substantial proportion of Plan expenditures, however, will finance construction and the purchase of equipment.

Some sixty per cent of Plan expenditures will be covered by foreign assistance. A detailed analysis of financial sources is given later, but the proportion of foreign assistance in the Third Plan will be lower than in the Second.

Nepal's absorptive capacity has been rising rapidly. This is seen from the expansion of expenditures over the Second Plan period and the fact that the Second Plan expenditure target has been achieved. The increasing availability of trained manpower, timely procurement and distribution of building materials, and the improvement of administrative efficiency are all important factors contributing to this result. If absorptive capacity rises further as expected, the Plan targets are clearly achievable.

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[1] Expenditures totalling Rs 600 million in 1969-70 include both public and private expenditures. Direct expenditures by various aid missions for supplies of technicians and other measures are excluded.

Out of the Rs 2,500 million to be spent during the Third Plan, the public, panchayat and private sector allocations are Rs 1,740, Rs 240 and Rs 520 million respectively. The public sector allocation includes development budget expenditures, commodity assistance and equipment and supplies provided directly by aid-giving nations.[1] In the past few years, development expenditures have been rising rapidly. In 1962-63, Rs 70 million were spent out of the development budget. By 1964-65, it rose to Rs 235 million. In addition, there are direct expenditures by the aid-giving nations on aided projects.

Spending capacity must be increased further in view of Nepal's needs and aspirations. The Third Plan calls for public sector development expenditures of Rs 310 million in the first year rising to Rs 390 million by 1969-70. In the light of past performances such an increase in absorptive capacity is feasible.

Panchayat Sector Expenditures

The mobilization of labour and other resources through the panchayat system is extremely important for social and economic development. As income levels rise over time, the panchayat capacity to mobilize resources will increase. In addition, greater authority will be given to the panchayat organizations in accord with the decentralization programme. Major responsibilities will be given to the zonal, district and gram panchayats.

The compulsory savings scheme instituted under the land reform programme will be an important sources of funds for the panchayats. In addition, as various central government functions are transferred to district and village levels, the panchayats will be given greater taxing powers. This will enable the panchayats to undertake development works of local importance with expanded resources. These will include activities in agriculture, irrigation, education, building construction, roads, cottage industries and drinking water. Since the capital, technical skill, and foreign exchange requirements for these are activities relatively limited, they can be effectively handled by the panchayats.

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[1] This excludes technical assistance including overseas training. The term "public sector" correctly should also include what we have identified as the "panchayat sector," but since greater emphasis will be given to development activity conducted by district and local panchayats, this portion of the total has been identified separately.

Private Sector Expenditures

The Plan calls for Rs 320 million of investment expenditures in the private sector. In the absence of data, it is difficult to estimate the allocation to the several fields of the private sector. Most private investment presently takes place in agriculture, industry and housing. Since the government will be responsible for the major part of investment in other sectors such as transport, health, and education, private investment expenditures have been estimated for industry and housing. These come to Rs 50 million for 1964-65.

Two factors should be noted. First, these expenditures include funds to be made available to the private sector by the Nepal Industrial Development Corporation, the Cooperative Bank, the Nepal Bank Ltd., and other government-financed credit institutions. Second, because of the lack of data, not all private investment is included. The Plan includes expenditure directly related to the above institutions. These cover industry, agriculture, transport and housing. Cultivators investment on a self-help basis is not included.

Some of the factors affecting industrial development are mentioned in the industrial policy section. Among these are the degree of tariff protection, tax policy, import licensing, foreign exchange facilities, etc. These factors will be studied and improved as necessary to provide a suitable climate for long term growth and to facilitate expansion.

Allocation of Plan Expenditures

The allocation of Plan expenditures, based upon the objectives and priorities as discussed earlier. are presented in Table 5. The largest proportion of resources goes into the development of transport, communication, and power. This takes 37 per cent of total Plan expenditures. Transport and power development is highly capital intensive and requires large amounts of funds. Thus, this sector is allocated more funds than agriculture, which is given top priority. Moreover, the amount of funds allocated to agriculture is not the full measure of expenditures which affect agricultural development. Development of industry, transport and power also benefit and stimulate agricultural expansion. Not all of the private sector investment in agriculture is included in the Plan. Construction and improvement of field channels and drainage facilities, terracing, and land clearance, undertaken by cultivators, are not included. All of these factors must be kept in mind in assessing the allocation.

Table 5. Plan Expenditures by Sectors, 1965-70.

Sector	*Public Expenditure*	*Panchayat Expenditure*	*Private Expenditure*	*Total Expenditure*	*Percent of Total*
			(Million Rs)		
Transport, Communication and Power	875.0	36.0	20.0	931.0	37.2
Agriculture & Irrigation	377.5	120.0	150.0	647.0	25.9
Industry	125.0	12.0	300.0	437.0	17.5
Social Services	292.5	72.0	50.0	414.5	16.6
Miscellaneous	70.0	—	—	70.0	2.8
Total	1,740.0	240.0	520.0	2,500.0	100.0

In the private sector, expenditures are allocated to industry, agriculture, transport and housing. Governmental resources have been concentrated more on expanding economic overhead in the form of transport, power and communication which will stimulate agriculture, industry, and transport in the private sector.

Basis for Sectoral Expenditures

The amounts allocated to each sector were determined on the basis of projects and activities to be undertaken by each department. These allocations do not necessarily cover the full cost of such activities. In some instances, the projects will extend into the next plan period. In other cases, allocations were made without the technical studies which were needed for detailed cost estimates. This applies more to major projects invloving construction than to other types of programmes. Therefore, as more data become available, adjurtments will be necessary within the overall Plan total.

Availability of Resources

Money is not the only resource required for the implementation of the Third Plan. In addition, trained manpower, construction materials, and other resources are necessary. Resource limitations have been one of the primary obstacles to a more rapid expansion of the absorptive capacity of Nepal. In making the sectoral allocations, foreign exchange, construction material, manpower requirements, transport facilities and other relevant factors have been taken into account. Programmes are, to the maximum extent possible, based upon present and realistically anticipated availabilities of the required factors.

Need of Maintenance

In view of the present state of limited [illegible] resources, it is necessary to exploit one of the existing projects to the maximum rather than merely constructing new projects. The nation's production can be raised without investing any additional capital, if the available roads, bridges, schools, hospitals and so on and so forth are utilized fully. So, the present Plan has laid an emphasis upon the maintenance programme in order to have optimum benefit out of them.

In Table 6, public sector expenditures are allocated among various departmental categories. The sector totals are the same as those given in column one of Table 5.

Table 6. Allocation of Public Sector Expenditures by Departments, 1965-70.

Sector and Department	*Department Total*	*Sector Total*	*Per Cent*
	(Million Rs)	*(Million Rs)*	
Transport, Communication and Power		*875.0*	50.3
Roads	500.0		
Aviation (including RNAC)	70.0		
Postal services	10.0		
Telecommunications	26.0		
Railway	9.0		
Power	260.0		
Agriculture & Village Development		*377.5*	21.7
Agriculture & Resettlement	130.0		
Land Reform	20.0		
Cadastral Survey	25.0		
Food	10.0		
Panchayat	30.0[1]		
Cooperatives	10.0		
Forestry	45.0		
Botany (medicinal Plants)	7.5		
Irrigation	100.0		
Industry		*125.0*	7.2
Industry	85.0		
Cottage Industry	15.0		
Mining	20.0		
Tourism & Archeology	5.0		
Social Services		*292.5*	16.8
Education	130.0		
Health	120.0		
Drinking Water	20.0		
Sports	2.5		
Engineering School & College	15.0		
Miscellaneous		*70.0*	4.0
Public & Fiscal administration	10.0		
Statistics	9.0		
Buildings	20.0		
Hydrological Survey	14.0		
Broadcasting	9.0		
Publicity	8.0		
Total		1,740.0	100.0

[1] Excluded Rs 40.0 million which will be made available to the panchayat sector by His Majesty's Government.

CHAPTER IV

Development Policy

Plan programmes must be based upon plan objectives and the policies to be implemented in the several sectors. These policies reflect not only activities to be undertaken by government but also assistance and facilities to be made available to the private sector. This will help clarify the relationship between public and private components of the economy. Another purpose of governmental policy formulation is to eliminate barriers to successful development. The programmes incorporated in the Plan are based upon certain principles and policies. The more important policies concerning agriculture, industry, trade and prices are discussed below :

Industrial Policy

Industrialisation plays a vital role in accelerating economic development. His Majesty's Government is committed to supporting further development of the industrial sector. Rather than getting involved in arguments about the relative roles of the private and public sectors, His Majesty's Government has taken a pragmatic view. In order to promote the industrial development in the private sector, His Majesty's Government will give special attention to available economic overheads such as transport and power. Government will provide financial and technical assistance to private development. Measures will be taken, however, to ensure that such development will be beneficial to the nation. Where the needs are greater than can be handled by the private sector, public sector units will be established.

Because public resources are limited, they must be directed to such areas as roads, power, and social services. Thus emphasis is placed upon private sector for development. Government will, however, provide necessary assistance. Some of the facilities and concessions presently available are :

1. *Income Tax Exemption*—New industries are not subject to income tax for ten years after the commencement of business. Thereafter, exemption may be granted wholly or partially as considered desirable.

2. *Export Duty Exemption*—New and old firms undertaking exports may be given full or partial import duty exemption for specified periods.

3. *Import Duty Exemption*—Imports of machinery spare parts, and raw materials may be given full or partial import duty exemption for specified periods.

4. *Foreign Exchange*—Foreign exchange will be made available to purchase machinery, spare parts, and raw materials which are unavailable, or available in inadequate quantities in Nepal, and for the remuneration of foreign technicians.

5. *Repatriation of Profits*—Any person investing foreign capital in industry shall be allowed to repatriate during any single year profits up to ten per cent of the capital investment.

6. *Repatriation of Capital*—Foreign investors making investments in scarce currency will be allowed to repatriate their investment. During any single year, such investors will be allowed foreign exchange for repatriation up to 25 per cent of their investment.

7. *Acquisition of Land and Timber*—Assistance will be provided in land acquisition, and timber needed for construction will be sold at a 15 per cent discount from the auction rate.

For industries which are considered essential to Nepal, His Majesty's Government will consider the provision of additional facilities as required. In addition, loans and technical assistance are available through the Nepal Industrial Development Corporation.

Trade Policy

In the modern age, no country can develop without trade relations with other countries. Developing nations must import technical skills and capital equipment. Development has, therefore, been associated historically with an increasing volume of trade. The limited market in a small country like Nepal indicates that industrial development will also depend upon exports. The present relatively low level of trade which Nepal has with other countries is a reflection of its low income level and underdevelopment. Steps will be taken during the Third Plan to expand and diversify trade.

The main objective of Nepal's trade policy will be to increase the volume of exports, the variety of products exported, and to diversify markets.

Nepal's imports are bound to rise in the years ahead as income levels rise and development activities expand. Recent trade data have yet to be tabulated and published. Therefore, estimates of import-export levels over the Third Plan period cannot be formulated. However, it is apparent that export earnings must increase to finance the large volume of imports needed. Production of import substitutes alone will not meet the problem. Special attention will, therefore be given to export expansion.

Export expansion hinges upon an increase in the production of export items. Since Nepal's exports consist mainly of agricultural products, especially foodgrains, an increase in agricultural production is essential. Just to increase the quantity of exports, however, will not be sufficient. The variety of goods exported must also be increased. Export dependence upon only a few agricultural products makes the nation overly subject to external price fluctuations.

Efforts will also be made to diversify the direction of trade. At present, Nepal's trade is almost wholly with India and insignificant with other countries. With accelerated development, imports of machinery and construction materials from overseas will increase. To finance these purchases, increased exports outside of India are essential. To encourage this increase provision has been made for the exporters to utilise a portion of their earnings to import goods into Nepal. In addition, steps will be taken to make Nepalese products more competitive in the world market by reducing costs and ensuring quality standards.

Imports into Nepal from overseas countries are subject to import licensing. This has been imposed to restrict the import of luxury goods. The available funds are needed to purchase essential development goods. Foreign exchange transaction with overseas countries will continue to be subject to licensing during the Third Plan. Changes will be made in customs tariffs as required to restrict luxury good imports. Policies will be implemented to ensure that export-import activities are primarily for the nation's benefit. If necessary, export-import activities will also be undertaken by government. The National Trading Corporation will play an important role in this field. The recently organized Food Corporation will also have a significant role in this connection.

Agricultural Policy

The Plan has placed primary emphasis upon the accelerated development of agriculture. In the past, the absence of an overall programme for agriculture has hindered development. In the Third Plan, emphasis is placed upon an integrated agricultural development programme based upon specific objectives rather than piecemeal projects and programmes.

There are two factors involved in agricultural development. The first is the expansion of agricultural output. The second is the transfer of human and capital resources from agriculture to other sectors. These two components are closely related. The expansion of agricultural output depends upon the adoption of new and improved agricultural techniques. The improvement of techniques will not only stimulate increased production but facilitate the transfer of resources to other sectors. At present, the Nepalese economy is heavily based upon agriculture. In the long run, this dependence must be reduced as economic growth is historically associated with a relative rise in the importance of other sector. Since 93 per cent of the population depends on agriculture and 65 per cent of gross domestic products come from this sector, Nepal must depend heavily on this sector for the generation of additional savings.

Because of the major differences in topography, soils and climatic conditions in Nepal, no single pattern of agricultural activity is feasible. In the hills and mountain areas, cultivable land and irrigation facilities are limited by the terrain. Greater emphasis should therefore be placed on animal husbandry and fruit production. Foodgrains and cash crops are more suitable for the Terai.

When the tempo of development activities expands and urbanization proceeds rapidly foodgrain demand will also rise. In the next few years, foodgrains will still be the primary export. Therefore, major emphasis will be given on the expansion of foodgrain production, because it can be raised in a short period of time with improved techniques.

Cultivators must be given every incentive to increase output. Improved seeds, fertilizers and better implements need to be made available at the proper times and places and at reasonable prices. To meet these requirements, an Agricultural Supply Corporation will be established. Cultivators will also need credit to purchase the required inputs. New cooperative societies will be established and existing ones will be strengthened to provide production loans. The Cooperative Bank will make funds available to these societies. Medium and long-term loans to individual cultivators will also be made available. An agricultural Bank also will be established to provide loans to individual cultivators at low interest rate.

The agricultural extension programme will be expanded and further strengthened. The land reform programme designed to protect tenancy rights and to prevent exploitation by landlords, merchants and money lenders will be completed during the Third Plan.

Prices received by the cultivators will affect their willingness to apply more modern techniques. Steps will be taken to ensure incentive prices and to improve marketing efficiency. Landlords who do not cultivate their own lands will be encouraged to put their resources to the industrial sector.

To reduce the pressure of population on land in the hill regions, some of the present population will be resettled in the Terai and Inner Terai. Efforts will be made to encourage the movement of labour from agriculture to the construction and industrial sectors.

Price Policy

Over the past few years, consumer goods prices have been rising. The experience of other developing nations indicates that prices tend to rise in the process of development. However, a rapid rate of increase will adversely affect development effort by hitting fixed income groups and stimulating speculative rather than productive use of savings. And, it will be more difficult to achieve the Plan targets due to the rise in the costs. Every effort will, therefore, be made to maintain a stable price level, particularly for construction materials and daily necessities.

The following are a list of factors responsible for rising prices in Nepal :

1. Due to rising development expenditures, Government expenditures during the Second Plan have more than doubled. In a low income country like Nepal, a large part of any increase in income is spent on the purchase of food and other essential consumer goods. This tends to push the prices of these goods upward. Prices are also under pressure due to increasing population.

2. Because of the open border with India, Indian prices, particularly of foodgrains, affect prices in Nepal. Indian food prices have been rising rapidly over the past few years. In addition, since most consumer goods are imported from India, inflationary pressures in India affect the prices of these goods in Nepal.

3. Because of underdeveloped transport, isolated areas may suffer shortages and price increases although the nation as a whole has a surplus.

4. The rapid expansion of money supply in Nepal is another factor. An increase in money supply is necessary to accommodate increased output and the monetization of the economy but the present rate of expansion is in excess of the rate required for the above purposes. Money supply has almost doubled over the Three Year Plan period.

To stabilise prices within the plan period the following measures will be taken :

1. The Food Corporation's activities will be expanded. Foodgrains will be purchased in surplus areas and transferred to deficit zones. Storage facilities will be expanded in different areas.

2. Efforts will be made to produce more consumer goods within Nepal and, where necessary, to import them on an orderly basis.

3. Money supply expansion will be curtailed. Instead of increasing foreign exchange reserves with the associated expansion of money supply, efforts will be made to use more of the foreign exchange receipts to purchase essential imports and thus provide greater benefit to the nation.

4. Since increased production will help to stabilize the price level, a balance will be maintained between projects which are directly and indirectly productive.

5. Prices of essential commodities will, if necessary, be directly controlled.

Regional Development Policy

Accelerated economic development requires the implementation of proper policies and institutional improvements on a national scale. Geographic concentration of Plan activities will not necessarily be conducive to overall national development. Development should take into account regionally available resources and productive factors.

The natural and human resources available in the several regions of Nepal vary both in variety and quantity. Given these natural resources which have been located and identified differ in accessibility and ease of development. Other cooperating factors are also required. For example, transport, communication, power and trained personnel are required for the development of available natural resources. These essential facilities cannot be provided throughout Nepal in the present situation. Because of these limitations, priority will be given to particular regions.

The availability of natural resources, transport facilities, topography and related factors will determine the regions which receive priority. Physically nation can be divided in two ways.

1. The first is in terms of major river systems. This is important because of the potential availability of power and the road network which will usually follow river valleys. On this basis, Nepal can be divided into three regions : the Karnali, the Kosi, and the Gandak-Bagmati river basins. At present, development activities are centered in the Gandak-Bagmati region. However, there are a number of development activities underway in the Kosi region. The Karnali region is in the preliminary stage of development.

2. The second basis of regional differentiation is topography, and on this basis the country can be divided into three regions—the Terai, the Hills, and the Himalayan belt. Mostof the developement activity is concentrated in the Terai and a small part of the hill area. This reflects the relative development of the economic overhead facilities in the several areas. In the agricultural sector, food-grains and cash crops will be emphasized in the Terai, horticulture in the hills, and animal husbandry in the northernmost region. Industrial development in the hills is possible but will occur slowly because of transport and power limitations.

It is desirable to divide the nation into regions to provide a basis for regional planning. Regional planning must be based upon resources availability and developmental potential. However, there is still a considerable gap in the knowledge about the existence of mineral resources, their quality, and their volume in these regions. Emphasis will be placed on survey activities to locate and explore available resources. Since the Himalayan and the far western regions have been most neglected, special attention will be given to their development.

Health, education, cottage industries and agricultural extension services, to mention a few, are activities with a national scope and will be expanded in all regions. The Panchayat system has encouraged the undertaking of local improvement works throughout the nation. These have helped to maintain and stimulate regionally balanced development. The decentralization programme will give further encouragement to local initiative and interest for local and regional development.

CHAPTER V

Financing the Plan

Since 1956, when His Majesty's Government introduced the First Plan, the absorptive capacity of the economy has been increasing. The financial and physical resources required for development have expanded correspondingly. In the past, the absorptive capacity was less than the amount of financial resources available. During the past few years, however, spending capacity has increased to such an extent that the availability of financial resources has become a limiting factor.

The rate of investment in Nepal is very low. During the Third plan, it is expected to rise to nine per cent of gross domestic product. This is still low compared to other developing nations, but in the light of past experience, it appears reasonable. Even so, greater effort in both the public and private sectors will be required to achieve such a goal.

A Review of the Second Plan

During the Second Plan, some Rs 600 million was estimated to have been spent in the public sector. Of this amount, it was planned that Rs 100 million would be financed internally (Rs 50 million from domestic revenues, Rs 10 million from internal loans and Rs 40 million by deficit financing). The remainder, Rs 500 million, was to be financed through foreign aid.

As a result of vigorous means to limit regular budget expenditures and to increase tax receipts, budgetary savings were larger than originally planned. Despite the pressure of increased prices and annual salary increments, regular expenditures were held to Rs 124.3 million in the first years Rs 114.5 million in the second and Rs 127.0 million in the final year. During this period, governmental tax and other receipts rose from Rs 129.6 million to Rs 188.5 million or almost 50 per cent. Total budgetary savings amounted to Rs 107.1 million over the period. In addition, Rs 20.6 million were secured from internal bond issues. Total internal financing including expenditure outlay cash balances amounted to Rs 133.40 million. Since the balance was provided by foreign assistance totalling Rs 470 million, the need for deficit financing originally planned was eliminated. Table 7 gives the sources of development budget expenditures in further detail. Table 8 gives the direct expenditure of the various aid agencies for development purposes. These do not go through H.M.G development budget.

Table 7. Sources of Development Budget expenditures, His Majesty's Government of Nepal, 1962-65.

Million of Rupees

	1962-63	*1963-64*	*1964-65*	*Total*
		Revised Est.	Revised Est.	
H. M. G.	11.20	41.50	80.70	133.40*
U. S. A.	39.30	65.02	66.90	171.22
India	3.60	11.18	62.40	77.18
China	2.20	8.50	10.10	20.80
U. S. S. R.	—	3.40	1.10	4.50
U. K.	—	.25	—	.25
Others	4.10	6.15	3.70	13.95
External Loans	10.00	10.30	10.60	30.90
Total	70.40	146.30	235.50	452.20

Table 8. Direct Developmental Expenditures by Foreign Sources for Technical Support 1962-65.

(Million of Rupees)

	1962-63	*1963-64*	*1964-65*	*Total*
		Revised Est.	Revised Est.	
India	10.00	22.82	—	32.82
U. S. S. R.	15.00	30.00	7.50	52.50
U. S. A.	7.50	9.38	9.40	26.28
China	1.00	6.20	17.00	24.20
Others	1.00	3.00	4.70	8.70
Total	34.50	71.40	38.60	144.50

* Includes the carry over of 1961-62

Preferably, all development expenditures should be reflected in the annual budget. Steps are being taken to do this—e.g. note that in the third column of Table 8, direct expenditures by India are not shown because these are now channeled through His Majesty's Government.

In the past, there has been a considerable gap between actual expenditures and budgeted amounts. This difference has, however, been decreasing. In 1963-64, for example, actual expenditures were 70 per cent of the budget. In the following year, the proportion rose to 80 per cent. Over the next five years, this gap is expected to be further reduced.

Financial Resources for the Third Plan

As presented in Chapter III, Rs 2,500 million will be spent in the public, panchayat, and private sectors during the Third Plan period. Public sector expenditures are programmed at Rs 1,740 million. In addition, His Majesty's Government will provide Rs 210 million to the private and panchayat sectors in the form of loans and subsidies. Thus, total central governmental requirements are Rs 1,950 million from internal and external sources. The remainder of the Rs 2,500 million must be generated by private investors and by district and village panchayats through taxation.

Table 9. Projected Sources of Finance for the Third Plan compared with Actual Sources for the Second Plan.

Source	*Second Plan*	*Third Plan*
		(*Million of Rupees*)
Surplus per regular budget	112.8[a]	550
Foreign Aid	432.4	1,050
Internal Loans	20.6	50
External Loans	48.9[b]	200
Panchayats	—	200
Private Sector	—	350
Deficit	—	100
Total	614.7	2,500

Financing of the Public Sector

Internal Resources

In the early years of planned development in Nepal, His Majesty's Government was unable to meet more than a small share of development expenditures and depended heavily on foreign assistance. In the 1951-61 period, regular budget deficits totalled Rs 160 million.[3] These were met out of accumulated governmental cash balances. Over the First Plan, 1956-61, the regular budget ran a Rs 62.7 million deficit. Cash balances were used to meet the deficit and also to provide funds for the development budget. During the Second Plan, with increasing recognition that Nepal should not depend wholly on foreign assistance for development financing, emphasis was placed on generating more internal resources. Priority was given to those projects which promised a direct return to governmental revenues.

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[a] This includes the carry over from balance of 1961-62.

[b] Rs. 18 million external loan provided to NIDC is also included.

As a result of these measures, government revenues rose rapidly. During the Third Plan such efforts will be continued. By 1969-70, it is estimated that governmental receipts will rise by Rs 88.5 million to Rs 340 million. Regular budget expenditures are expected to rise from Rs 127.0 million to 216.2 million over the same period. Table 10 shows the expected sources of governmental revenue over Plan period.

Table 10. Sources of Revenue and Total Regular Budget, 1965-70.

Sources	*Second Plan*	*Third Plan*
	(Million Rupees)	
Customs	166.7	441.8
Excise	35.1	112.1
Land Revenue	151.5	230.0
Forests	38.8	93.3
Income Tax	14.2	50.8
Other Taxes	28.2	18.3
Interest and Dividends	8.4	68.0
Miscellaneous	333.3	116.0
New Taxes	—	322.3
Total Receipts	476.2	1,452.0
Total Regular Budget Expenditure	369.1	902.6
Balance available for Development Budget	107.1	350.0

Sources of Internal resources

From the additional taxes levied in 1964-65, there will be an increase of total tax receipts from Rs 188.5 million to Rs 224.2 million. Regular expenditures are expected to increase from Rs 127.0 million to Rs 216.2

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[3] Regular budget expenditures are distinguished from development budget expenditures in that the regular budget encompasses established government activities, whereas the development budget is concerned with the outlay for new or development projects and activities.

million. Out of the present taxes, over the Plan period, there will be a saving of Rs 177.7 million.

During the Plan period as a result of governmental efforts, customs receipts will increase. Similarly revenue from excise and income taxes will rise as a result of administrative reforms in the tax mechinery and rising incomes. Other tax receipts are also expected to rise. In addition, government enterprise earnings will rise as management improves.

Keeping the present tax rates, by 1969-70 total revenue will rise to Rs 224.2 million. This will amount to four per cent of gross domestic product. In the United States and the United Kingdom, governmental receipts amount to some 25 per cent of national income. In underdeveloped countries like Nepal, government collects 10 to 12 per cent of national income. Therefore, there is scope for further increase in revenue by His Majesty's Government. By introducing new taxes and increasing existing rates an additional Rs 322.3 million will be collected over the Plan period.

Although 65 per cent of gross domestic product comes from the agricultural sector, less than 25 per cent of government income comes from taxation of agriculture. Imposition of a greater tax load on agriculture is not, therefore, unreasonable. There is considerable scope for increasing taxes in the agricultural sector to finance development expenditures. During the Plan period, therefore, taxes in this sector such as the land tax will have to be increased.

In order to increase government income, rates of the custom duty will be studied and changed as necessary. Special attention will be paid to basic consumer and development goods. Increased tax rates and receipts will occur in this sector. Encouragement will be given both in the public and private sectors to produce goods not presently produced in Nepal. These new goods will be taxed as necessary to increase governmental receipts.

Nepal's rates of income taxes are lower than those of many underdeveloped countries. The maximum rate is 40 per cent of income. These rates need to be increased to raise more revenues.

In order to reduce income differentials in Nepal, direct taxes should be levied. Since income levels are very low, the number of taxpayers will be quite small. Through these taxes alone, therefore, the development programmes cannot be fully financed. Indirect taxes will still continue to be an important source of income in the years ahead.

Sales taxes will be levied during the Plan period. In other countries, low sales taxes are an important source of governmental receipts. In addition, financial conditions and financial administration in Nepal will be studied and additional indirect taxes levied.

Internal Loans

The system of raising internal loans for the country's economic development started only two years ago. The two years, experience has been quite encouraging. Funds totalling Rs 13.1 million were generated in the second year of the Three Year Plan through the issue of government development bonds. In the final year, 1964-65, Rs 7.5 million were raised by the same procedure. Over the Third Plan Period, Rs 10 million will be raised annually, making a total of Rs 50 million to be spent on development projects.

Although a deficit of Rs 100 million is projected in Table 8 above, it is anticipated that deficit financing will not be the method followed in making up this gap. Additional taxes will be generated, domestic borrowing through sale of bonds increased, and additional foreign assistance obtained.

Foreign Assistance

Although domestic revenue available for development purposes has increased considerably, it is still inadequate to cover the entire development budget for the Third Plan. Therefore, foreign assistance will continue to be necessary for a number of years. During the Third Plan, Rs 1,250 million will be needed from this source to finance planned expenditures. On the basis of current negotiations, participation by various countries and agencies will be as follows :

India : The major projects started during the Second Plan will be completed in the Third Plan period, the estimated cost to run them being 200 million. Of the various projects undertaken to date by India, the most significant are the Trisuli Hydel, the Chatra Canal, and the Sunauli-Pokhara road. The Indian Government has also agreed to undertake construction of a portion of the East-West Highway.[3] Additional assistance is expected to be spent on smaller continuing projects and new activities to be undertaken during the Plan period.

United States : Assistance from the United States each year is expected to remain at roughly the same level during the Third Plan as in the Second. Grant assistance is expected to total Rs 310 million. Another, Rs 70 million will be received from general commodity assistance and in the form of machinery and equipment for the East-West Highway, giving a total of Rs 380 million for various development projects. In addition, Rs 90 million will be provided for technical assistance and training facilities. These latter costs are not included in Plan expenditures and therefore are in addition to the Rs 1,250 million of foreign assistance expected.

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[3] The total expenditures to complete these projects are estimated at Rs [illegible] million. Actual assistance received during the Plan period will be somewhat smaller since some of the projects will be carried over to the Fourth Plan.

U. S. S. R. : During the Third Plan, the Simra-Janakpur highway and an agricultural implement factory will be constructed with Soviet assistance.

People's Republic of China : The Kathmandu-Kodari road and the brick and tile factory will be completed during the Plan period. Third Plan expenditures on those two projects are estimated at Rs 60 million. Additional projects will also be started with Chinese assistance.[1]

Other Assistance : Additional assistance will also be received from Germany, the United Kingdom, The United Nations, Australia, Switzerland, New Zealand, and the Ford Foundation. Economic and technical assistance for transport development is expected from the International Bank for Reconstruction and Development and the International Development Association.

Technical Assistance

In addition to financial assistance, technical and advisory personnel have been provided by friendly nations and international agencies. Their cost to the assisting nation amounts to Rs 10 million annually. Because of the shortage of technicians and professionally trained manpower in Nepal, there will be a continuing need for foreign technical assistance during the Third Plan.

The cost of these technicians has not been included in the Plan total. Cost data is difficult to obtain and the benefits from technicians' services are equally difficult to measure in monetary terms. Nepal will continue to send its young men and women abroad for specialized training because of the limited facilities available within the country. As the cost of training varies widely from country to country, this also has not been included in the Plan.

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[1] The total Chinese assistance on these projects is Rs 250 million. Since some of the larger projects will not be completed during the Plan period, actual expenditures will be somewhat smaller.

Panchayat Sector

It is estimated that Rs 340 million will be collected under the compulsory saving component of the land reform programme over the Third Plan. Out of this, Rs 180 million will be used to provide credit to the tillers. The balance of Rs 160 million will be the net saving. Local panchayat resources are estimated at Rs 40 million over the Plan period. Therefore, Rs 200 million will be made available from the panchayat sector.

Private Sector

Over the Third Plan, Rs 520 million will be invested by the private sector. Of this total, Rs 350 million will be secured from private savings. The balance will consist of loans from the Nepal Industrial Development Corporation, the Cooperative Bank, and other governmentally supported financial institutions.

Monetary Policy

The establishment of the central bank, the Nepal Rastra Bank, in 1956, filled a major gap in the monetary system. In its initial years, the Bank did little more than act as banker to the government. During that period, Indian currency circulated freely throughout the country. The exchange rate between Indian and Nepalese currencies, however, fluctuated considerably. Beginning in 1960, however, the Nepal Rastra Bank stabilised the exchange rate, fixing it at Rs 160 NC per Rs 100 IC, and was put to an end the years, unstable exchange rate of Indian and Nepalese currency.

Various measures were taken during the Second Plan period to convert to a single currency system. As a consequence, the use of Nepali currency is expanding, while the circulation of Indian currency is declining. By the end of the Third Plan, it is expected that Indian currency will no longer be used for commercial transactions in Nepal.

The quantity of Nepalese currency in circulation increased rapidly during the Second Plan period. In July, 1962, the money supply amounted to Rs 227.8 million. By July 1965, it had increased to an estimated Rs 400 million. Over the three year period, the money supply rose by 93 per cent, a rapid rate of increase.

One of the reasons for the expansion of the money supply is the replacement of Indian currency. The actual increase in money supply cannot be determined since there is no data on the amount of Indian currency withdrawn over the Plan period.

It appears, however, that the total money supply expanded considerably with attendant pressures on prices. During the Third Plan period, a detailed study will be made of the rate of increasing of the money supply needed to meet trade and commerce requirements. The Government will then limit the money supply expansion to the required amount. Policies will be adopted to limit the expansion of Indian currency balances. With the establishment of her own currency system, Nepal is now in a position to influence the price level through monetary policies.

Foreign Exchange

Since November, 1960, all convertible currency transactions have been handled through the Nepal Rastra Bank. In July, 1960, the Bank held Rs 55.75 million of convertible currencies and gold. By January, 1965, convertible reserves had risen to Rs 192.71 million, an increase of 246 per cent. Similarly, inconvertible foreign exchange during this period rose from Rs 82.1 million to Rs 204.7 million.

The Second Plan estimated convertible currency requirements to be provided by Nepal for plan expenditures at Rs 65 million. Actually HMG spent Rs 50 million from its own resources. During the Second Plan period Nepal's convertible foreign exchange receipts from exchange were Rs 175.8 million and expenditures were Rs 116 million. Therefore, there has been an increase of Rs 59.8 million convertible balances, as shown in Table 11.

Total foreign currency receipts over the Second Plan period cannot be estimated because of the absence of data. Some parts of Nepal still use Indian currency to transact business across the border. This practice has complicated the analysis of foreign exchange receipts. The balance of Indian currencies held in the Central bank has also increased considerably. To hold foreign balances in excess of normal requirements is undesirable from the economic point of view. Therefore during the Third Plan, foreign exchange will be utilised for maximum benefit to the economy.

Table 11. Convertible Foreign Exchange Receipts and Expenditures 1962-65.

Item	*1962-63*	*1963-64*	*1964-65*	*Total*
		(Million Rupees)		
Receipts	51.3	55.2	69.3	175.8
Expenditures	33.4	37.3	45.3	116.0
Balance	17.9	17.9	24.0	59.8

The foreign exchange requirement for the Third Plan will be much larger than for the Second Plan. A substantial part of the increase will be secured from foreign assistance. A total of Rs 220 million remaining to be provided out of Nepal's own receipts. Table 12 gives the estimated receipts and expenditures of foreign exchange over the Plan period.

Table 12. Projected Foreign Exchange Receipts and Expenditures 1965-70

Year	*Receipts*	*Expenditures*			*Balance*
		Regular	*Development*	*Total*	
	(Million Rupees)				
1965-66	56.1	17.0	26.0	43.0	+13.1
1966-67	57.3	17.5	35.0	52.5	+ 4.8
1967-68	59.2	18.0	44.0	62.0	− 2.8
1968-69	61.0	18.2	53.0	71.2	−10.2
1969-70	62.8	18.5	62.0	80.5	−17.7
Total	296.4	89.2	220.0	309.2	−12.8

According to Table 12, total foreign exchange receipts will amount to Rs 296.4 million. Rs 89.2 million will be spent on imports of goods and services associated with regular budget expenditures, Rs 220.0 million in those associated with development budget expenditures. The estimated total expenditure is Rs 309.2 million. This leaves a deficit of Rs 12.8 million over the Plan period. Efforts will be made to eliminate this shortfall by reducing expenditures and increasing receipts, particularly through export promotion. Any remaining shortfall can be met out of foreign exchange reserves. The anticipated overall deficit is only three per cent of present reserve holdings.

The cost of construction materials, equipment and other imports to be financed by aid-giving countries has not been included in Table 12. The amount of such assistance will depend on the projects to be undertaken by the several nations. Even for projects already considered the data necessary to estimate import costs are not available.

Financial Institutions

In order to mobilize internal and external resources more effectively, it is necessary to strengthen the financial institutions in Nepal. The commercial bank and other institutions have provided short term loans at relatively low interest rates for commerce, trade and industry. Long term loans are also needed for industrial and agricultural development. Financial institutions to meet these requirements are essential for economic growth. His Majesty's Government has taken various steps to collect available savings including the establishment of specialised financial institutions. During the next five years, the existing institutions will be strengthened and new units established as required.

Nepal Industrial Development Corporation (NIDC)

NIDC was established as a government corporation in 1954 to provide financial and technical assistance to the private sector. During 1960-61, loans and equity participation of Rs 411 thousand were made available to private companies. Over the Second Plan period, another more than Rs 30 million were made available. During the Third Plan, the activities of the Corporation will be expanded still further.

Cooperative Bank

The Cooperative Bank was established during the Second Plan to provide loans funds to cooperative societies and individual farmers for agricultural development. His Majesty's Government has provided Rs 2.7 million in share capital and loans to the bank. During the Second Plan, the bank made loans totalling approximately Rs 1.6 million. The organization of the bank will be strengthened and its operations greatly expanded.

National Commercial Bank

The Nepal Bank, established in 1938, is at present the only commercial bank in Nepal. As this bank alone cannot meet the financial requirements of commerce, trade and industry, a new bank, the Nepal Commercial Bank has been established in the public sector. This institution will begin operations during the Third Plan. It will develop banking facilities in areas which are presently not served by a commercial bank and operate as an agent of the Nepal Rastra Bank. This will relieve the Rastra Bank of some of its present functions and enable it to concentrate its efforts upon improving the monetary system of the country.

Agricultural Bank

At present, there is no institution beside the Cooperative Bank to provide medium and long term loans to cultivators for agricultural development. Since the existing bank cannot effectively provide loan facilities to both the cooperative societies and individual farmers, a separate bank will be established during the Third Plan.

Insurance Companies

Insurance enterprises have been an important source of savings in developed and developing countries. Nepal as yet has not been able to establish its own insurance companies. These functions are presently handled by foreign firms. Premium collections are estimated at Rs 8 million annually. In order to keep these funds within the country, insurance activities will be initiated during the coming plan period.

Stock Exchange

Stock exchanges play an important role in the development of financial institutions and the channelling of savings into investment opportunities. Plans are therefore being made to establish a stock exchange in Nepal.

CHAPTER VI

Population and Manpower

Manpower is the most important resource of any nation. The future of a country which has a literate, healthy, and hard working population is bright regardless of the availability of other resources. One measure of development is the level of production. This is affected not only by the numbers but also the quality of the labour force. Labour quality is dependent upon literacy, physical and intellectual development, technical knowledge, and the adaptability of the workers to new environments. Population growth also vitally affects economic development. A rapid rate of growth tends to hold back development. It is, therefore, necessary to analyse the existing population and its anticipated growth as a part of the planning process.

Population

The first national population census was taken in 1911-12. It counted 5,638,749 persons in Népal. Population censuses have been taken every ten years since then. The first census based on international standards was conducted in 1952-54. The difficult nature of the terrain, the poor transport facilities and the shortage of trained manpower made it necessary to spread the field activities over two years, thus casting some doubt upon the reliability of the figures. The latest census, 1961-62, was completed within a shorter period and more modern techniques were applied. The results are, therefore, presumed to be more accurate.

pulation Increase

From 1910-11 to 1961-62, population increased by 3,861,630 or 69.12 er cent. This is an average annual increase of 1.4 per cent. As a result f health services expansion, life expectancy is rising and the rate of population increase has undoubtedly also risen. Between the censuses of 1954 nd 1961, the rate of increase averaged 1.8 per cent annually. The rate as undoubtedly risen further and is probably about 2.0 per cent at present. A sample survey of births and deaths in 1964 tends to confirm this 2.0 per ent rate.

An analytical study of the latest census data indicates that the infant ortality rate is 244 per 1,000 births ; the birth rate, 41.8 ; and the death ate, 20.8. Life expectancy at birth is estimated at 32.01 years.

The death rate is expected to decline further as medical facilities expand. The birth rate is not expected to decline significantly unless family planning programmes are effectively implemented. Thus, the rate of increase is most likely to rise in the years ahead. An estimate of future population is given in Table 13. The estimates are based upon the 1961-62 census data plus the results of sample surveys and other studies. The rate of increase during the Third Plan is estimated at two per cent per annum, during 1970-75 at 2.2 per cent and over 1975-80 at 2.4 per cent.

Table 13. Population Projections by Age Groups, 1960-80

Year	*Age Groups*			*Total*
	0-14	*15-59*	*60 & over*	
		(Thousands)		
1960	3,730	5,108	487	9,325
1965	4,118	5,639	537	10,294
1970	4,546	6,226	593	11,365
1975	5,069	6,942	661	12,672
1980	5,708	7,816	745	14,269

Age Distribution

The increase from 1965 to 1980 is estimated at 3,974,398. The 0-14 age group now contains 40 per cent of the total population, the 15-59 age groups 54.8 per cent, and the 60 and over group 5.2 per cent. The position in the non-productive age groups is relatively high : 45.2 per cent of the populatio falls in the dependent-age categories. This percentage is likely to rise the future. Unemployment in the 15-59 age group may rise and fem participation in the labour force is likely to rise as development occurs.

A reduction of the birth rate usually occurs only over a period of years. The death rate is likely to fall more rapidly. By 1980, life expectancy a birth is expected to rise to 42 years and infant mortality to decline to 1 per 1,000.

If the population increases as estimated, the demands for health, educa tion, resettlement, and employment will become even more difficult to satisfy. The primary education age group, 6-10, will increase by 30 per cent. The will be an increase of 2,200,000 in the 15-59 age group. The populatio pressure on land will further increase and more resources must be directe toward creating new employment opportunities. Simply to maintain present per capita income, production must increase. Scarce resources wi be absorbed in maintaining income levels rather than increasing them. This emphasizes the necessity of undertaking an effective and widesprea family planning programme.

Increasing population means greater population density. At prese there is an average of 175 persons per square mile. Because of the topography cultivable land is limited and density per cultivable area is much higher.

TABLE 14. Population Density per Cultivated Area by Regions, 1961.

Region	*Cultivable Area* (in Km.)	*Populatio* (in Km.)
Nepal	11,373	2,118
Eastern Hills	1,189	4,062
Eastern Inner Terai	309	1,605
Eastern Terai	4,842	1,170
Kathmandu Valley	179	6,731
Inner Terai	346	1,810
Western Hills	1,246	5,998
Western Inner Terai	574	674
Western Terai	1,104	928
Far Western Hills	670	6,485
Far Western Terai	1,114	622

SOURCE : Agricultural Census, Preliminary Report, 1961

As shown in Table 14, population density in the Terai per unit of culti vated area is less than in the hills. This indicates the desirability of shifting ate of the hill population to the Terai and Inner Terai. Unless the transfer is made, per capita production in the hill areas is likely to decline with urther population increase.

Labour Force

The labour force in Nepal is defined as the group above the age of 15. t present the total is estimated to be 4,107,222 as shown in Table 15. Table 5 shows labour force data.

Table 15 Distribution of the Nepalese Labour Force by Regions and by Occupation

Occupation	*Hills*	*Kathmandu Valley*	*Terai*	*Total*
griculture ...	2,455,526	107,822	1,367,754	3,931,142
ndustry ...	29,156	8,149	11,070	48,375
onstruction ...	802	2,200	375	3,377
lectricity/Water ...	—	567	141	708
ommerce ...	7,047	14,798	11,905	33,750
ransport ...	1,422	5,099	951	7,472
ervice ...	18,122	24,597	20,920	63,639
thers ...	18,181	2,416	13,084	33,681
Total ...	2,531,082	166,648	1,425,174	4,122,904

According to the above table, 96 per cent of the labour force is engaged i agriculture and forestry, 1.2 per cent in industry, 1.5 per cent in servic ss than 1.0 per cent in commerce, and 1.7 per cent in other occupations. large proportion of the labour force in non-agricultural activities is found Kathmandu. In the Terai and in the hills, the agricultural proportion correspondingly high.

A comparative study of the censuses of 1952-54 and 1961-62 shows at 59 per cent of the population was counted as in the labour force in the rlier period with equal male and female participation. By 1961-62 only .3 per cent was included. The reason for the decrease is due to the ext nsion of educational facilities. The proportion of the population considered literate in 1952-54 was 4.4 per cent. Of this group, 65 per cent had tended or were attending Primary School, 26 per cent Secondary School d 10 per cent College. By 1961-62, 8.9 per cent of the population were in e literate category. Of these, the Primary School portion had risen to

72 per cent, the Secondary School portion to 18 per cent, 7 per cent in th intermediate degree category and 3 per cent in the higher levels of colleg training.

Assuming that the labour force increases at the same rate as the population, and in the same proportion for agriculture and other sectors the pressur on agricultural occupations will increase. Therefore, employment opportunities outside of agriculture must expand, not only to stimulate economi growth but also to maintain existing income levels. One of the primary objectives of the Third Plan, therefore, is to transfer labour from agricultur to other sectors.

Technical Manpower

Technically trained manpower is required to implement the development programmes. One of the main difficulties in carrying through development projects in the past few years has been the shortage of trained technicians. In order to overcome this shortage, various training faciliti were set up during the First and Second Plan periods. In addition, me and women were sent abroad for training. Although these steps have helpe overcome the problem, the shortage is still not fully met. More trained ma power will be required as the pace of development activity expands. Th following factors must be considered.

1. The time required to train technicians and professional people At least five to six years are required to train doctors, engineers and high level technicians. Two to three years are needed for overseers, nurses, and agricultural assistants. Therefore, the training programmes and the numbers to be trained should be determined in terms of a long term development perspective. For example, those sent for high level training during thi plan will only be available after the end of the Plan.

2. Experience shows that the ratio of middle level technicians to professional manpower need is at least 3 or 4 to one. The ratio of skilled workers such as brick layers and carpenters to middle grade technicians is about four or five to one. The experience of other nations shows that middle level technicians will be in short supply, but in Nepal even low level technicians are in short supply. In some instances, the aid-giving nations wil provide technicians to meet these shortages.

Training Policy

Governmental policy is to provide training facilities within the country for all except a few specialists. During the Second Plan, training faciliti were provided within Nepal for middle level technicians. In the Third Plan, higher level and professional training will be started. These will consist of an agricultural college, an engineering college and a medical school. Because of the time necessary to establish these institutions, their output will not enter the market until the last years of the Third Plan or in the Fourth Plan. Therefore, outside training facilities for high level technicians will be expanded. At present, there are virtually no training facilities for skilled workers and low level technicians except in the agriculture and forestry areas. Training of skilled labour must be provided to meet the expanding requirements.

Training Facilities

Under the foreign scholarship programme students will continue to be sent abroad for training. In the past three years, the number who have been sent abroad is 996. The number 543 is highest in technical fields such as engineering, health, and agriculture. Of the total, 51 per cent or 517 were sent to India, 142 to the United States, 76 to the USSR, 66 to the UK, and 24 to China. Students have also been sent to Pakistan, Germany, Israel, Czechoslovakia, Yugoslavia, Poland, Ceylon and Japan. Within Nepal, an additional 470 were trained in agriculture, 182 in forestry, 130 in engineering, 245 in health, 1,087 in primary education, 1,386 in cottage industries, 1,745 in panchayats and 205 in the cooperative sector. (Detailed data are given in the respective appendix tables).

Trained Manpower Requirements

Table 16 gives an estimate of the additional trained manpower required during the Third Plan, estimated availability and the anticipated gap.

Expansion of Training Facilities

In order to meet the expanding requirements for trained manpower, existing training facilities will be expanded and new units started. As noted above, an engineering college, a medical school, and an agricultural college will be established. Even with these new facilities available, trained manpower will be inadequate to meet demands. Trained personnel from outside will, therefore, continue to be utilized.

There are fourteen training centers for middle-grade technicians. In addition, more limited training programmes are conducted by several government departments. It is evident that additional training facilities are required. There has been a rapid expansion in the demand for engineers, particularly mechanical engineers. There is a pressing need for technicians

TABLE 16. Manpower Requirements, Availability and Deficits, Third Plan

Subject	Required	Available		Deficit
		Internal Training	External Training	
ENGINEERING				
Electrical …	50	—	25	25
Civil …	150	—	85	65
Mechanical …	50	—	23	27
Mining …	15	—	7	8
Others …	50	—	38	12
Overseers and Draftsmen …	1,000	250	—	750
Mechanics …	787	1,455	295	389
Welders …	217			
Sheet Metal Workers	120			
Blacksmith …	65			
Machine Operators …	270			
Technologists …	61			
Electricians …	619			
HEALTH				
Medical Doctors …	94	—	141	—
Nurses and Midwives	581	550	—	—
Health Workers …	1,000	400	—	600
AGRICULTURE				
Agricultural Graduates	256	28	27	201
J. T. A. …	1,419	510	—	909
FORESTRY				
Forest Specialists …	24		3	21
Rangers …	169	175	—	—
Foresters …	428	350	—	78
EDUCATION				
Primary teachers …	5,000	5,000	—	—
Secondary teachers …	1,000	1,000	—	—
COOPERATIVES				
Inspectors and Sub-Inspectors …	605	605	—	—
SURVEYS				
Survey Inspectors and Surveyors …	3,000	1,000	—	2,000

and skilled labour in the construction sector. The one unit in this area has very limited capacity ; hence it must be expanded and additional facilities established. A polytechnic institute will help meet these requirements by providing training in a variety of areas. The present engineering school will therefore be expanded into a polytechnic institute. Other facilities will be established for low level technicians.

Efforts will be made to utilize more effectively the services of the retired soldiers who have received technical training abroad. It is estimated that some 300 soldiers with such training retire annually. The largest skill-group consists of mechanics.

Technical Assistance

The technical assistance which Nepal receives from aid-giving agencies is very important because of the limited number of persons with the essential training and experience available in Nepal. Such assistance, moreover, will stimulate the development of local skills and talents. Every effort will be made to utilize these technicians effectively to upgrade rather than to compete with Nepeli personnel.

PART II

DEVELOPMENT PROGRAMMES

CHAPTER VII

Agricultural Development

In addition to the heavy concentration of the labour force in agriculture, the economy as a whole is dominated by this sector: in 1964-65, 65 per cent of the gross domestic product is estimated to have been derived from this sector and eighty-five per cent of current exports consist of agricultural products.

Since Nepal is an agricultural country with a low yield level of output in comparison with other countries, national output is also very low. The world average yields of paddy, maize and wheat are 2,030, 2,080 and 1170 kilograms per hectare ; whereas the yields in Nepal are only 1,819, 1,898 and 1,112 kilograms per hectare. In Japan the average yield per hectare of these foodgrains is 4,700, 2,700 and 2,740 kilograms. It is evident that a substantial increase in agricultural output can be achieved through improved techniques. The expenditures required for improving techniques will be less than those required in other areas. Since output can be increased at relatively low cost it is imperative, to meet the target of doubling national income within fifteen years, that major stress be given the development of agriculture.

Present Condition

In the First and Second Plan periods, special attention was given the establishment of experimental farms and livestock centres and the training of middle-grade technicians. At present there are eleven agronomy farms, four crop protection centres, an agricultural implement research and production unit, 16 horticulture centres, four livestock breeding units, two sheep breeding centres, three pig farms, two poultry farms, one hatchery, one research station, 35 veterinary hospitals and dispensaries, three cheese centres, one central dairy, seven fishery units, a resettlement centre and a tractor station.

During the Second Plan period 680 middle-grade technicians were trained. One or more middle-grade technicians were sent to 35 of the 75 development districts to participate in the extension programme.

Problems of Agricultural Development

There are two major problems facing agriculture in Nepal. First, as noted, present agricultural output is low and will have to be increased through a variety of activities. Second, the incentive to increase output is lacking in the existing agricultural system. The land reform programme has been started with the purpose of providing the necessary incentives. This will be discussed later. The essential factors for increasing production are improved seeds, fertilizer, irrigation, crop protection, and improved implements. Unless these factors are effectively combined, agricultural production will not rise. As most of the cultivators in Nepal are illiterate, they are hesitant to change from their traditional system of cultivation to modern techniques.

The seeds used by cultivators are of low quality and subject to insect damage. As a result, yields are low. Thus if improved seeds were used, a ten per cent increase in production could be achieved.

The yield of land declines after continuous cultivation without use of fertilizers. Fertilizers should be applied to maintain and increase crop production. One of the reasons for low yields is the very limited use of fertilizers. Research has shown that the use of one ton of chemical fertilizer will increase foodgrain production by some ten tons. When the cost of fertilizer and the value of the additional output are taken into account, one rupee spent on fertilizers will bring a return of four rupees.

There are only limited irrigation facilities in Nepal. Where such facilities are available, they have not been properly utilized. In many districts in the Terai, production could be doubled by spending Rs 17 per acre on irrigation.

Although a part of the foodcrops is destroyed by insects cultivators have not given sufficient attention to crop protection. As a result some 15 per cent of the total output is lost through damage.

A substantial increase of output can also be achieved by the use of improved agricultural implements. Use of improved ploughs and other implements has taken place on a very limited scale.

Because the above measures have not been utilized by the tillers, there has been little increase in agricultural output. Total cultivated area is 1,831,000 hectares. Not more than 50,000 kilograms of improved seed were used on not more than 1,000 hectares annually during the Second Plan period. Annual utilization of chemical fertilizer is only 2,000 metric tons ; some 71,000 hectares are under irrigation, which is only four per cent of total cultivated land. Similarly, little use of improved implements been made.

Objectives and Targets

Agricultural output must be increased to meet the food requirements of the growing population, to provide raw materials for expanding industries, and to earn foreign exchange through larger exports. The production of meat, eggs, fruits, etc. will also have to be increased to fulfill nutritional requirements more adequately.

In the light of the increasing requirements within Nepal and the need for increasing exports, priority has been given to agricultural development. Sixty per cent of the income from exports is derived from exports of food grains alone.

In the light of the above objectives, the Plan target is to increase foodgrain production by 15 per cent and cash-crop output by 73 per cent. The production target of various foodgrains and cash crops is given in Table 17.

Table 17. Current Food Grain and Cash Crop Production and Targets for the Third Plan.

Product	*Production 1964-65*	*Target 1969-70*	*Additional Production*	*Percentage Increase*
Food grains		*(Metric Tons)*		*(Per Cent)*
Paddy	2,201,270	2,367,670	166,400	7.5
Wheat	151,892	424,612	272,720	179.5
Maize	854,968	917,810	62,842	7.3
Millet, Phapar, etc.	62,880	65,000	2,120	3.4
Total	3,271,010	3,775,092	504,082	

Product	Production 1964-65	Target 1969-70	Additional Production	Percentage Increase
Cash Crop	*(Metric Tons)*			*(Per Cent)*
Sugar cane	126,000	252,000	126,000	100.0
Tobacco	9,330	23,325	13,995	150.0
Jute	38,812	54,336	15,524	40.0
Oil seeds	51,005	60,185	9,180	19.0
Total	225,147	389,846	164,699	

Additional production of fish, poultry and animal products, fruit, and vegetables is to be achieved by distributing the basic stocks required e.g. seed, chicks, fingerlings, etc. In Table 18 the targets to be achieved are set forth.

Table 18. Production Targets for Selected Commodities and Basic Stock to be Distributed, Third Plan.

	Production Targets		*Stock to be Distributed*	
Commodity	*Additional Output*	*Unit*	*Item*	*Quantity*
Fish	1,006	M.T.	Fingerlings	12,500
Poultry	1,591	M.T.	Chicks	1,100,000
Vegetables	81,000	M.T.	Seed	700 (Tons)
			Grafts	29,100,000
Fruit	210,000	M.T.	Trees and Grafts	7,000
			Improved-Pigs	12,756
			Lambs	3,000
			Calves	1,069

Components of the agricultural programme which will contribute materially to increased output are set forth in quantitative terms in Table 19. Several of these are either related to, or another way of representing, targets noted above.

Table 19. Components of Agricultural Activity to be stressed in the Third Plan and Associated Targets.

Activity	*Unit*	*Existing Coverage*	*Coverage by End of Third Plan*
Improved Seed Use	Hectare	2,000	300,000
Minor Irrigation	Hectare	8,000	45,900
Soil Conservation Practices	Hectare	—	[illegible]
Chemical Fertiliser Use	Metric Ton	2,000	221,000
Crop Protection (insect and disease)	Hectare	—	150,000
Fruit and Vegetable area	Hectare	—	5,000
Families Resettled	Number	—	6,000
New Land Cultivated	Hectare	—	13,900
Green Manure Use	Hectare	—	10,000
Compost Use	Hectare	—	140,000
Animals Artificially Bred	Number	—	100,000

Programmes for Various Foodgrains

Paddy

Paddy is the main crop of Nepal and is cultivated on some 1,100,000 hectares. Since there is little possibility of expanding paddy cultivation into new areas, the target of an increase of 7.5 per cent will be achieved by using improved techniques on 350,000 hectares. On 200,000 hectares of this total, 22 per cent of the increase in production will stem from increased use of chemical fertilizer and 78 per cent from the use of natural fertilizer, improved seed, and irrigation water. Improved seeds will be used on 75 thousand hectares, especially in the hill regions. Thirty per cent of the total fertilizer use target will be for paddy.

Maize

In the hill regions of Nepal, maize is the main food item of the people. Maize is cultivated on some 460,000 hectares. Cultivation can be expanded by another 245,000 hectares. Out of the 245,000 hectares, 28.5 thousand will be brought under maize during the Plan period. Manure and other fertilizers will be used on 30 thousand hectares, and hybred seed will be sown on 28.5 thousand hectares. This program will be emphasized in the Hills and in parts of the Inner Terai.

Wheat

Winter crop production in Nepal is very limited largely because of the limited availability of water. Wheat is cultivated in some 125,000 hectares, although the total cultivable area on which wheat could be grown is 1.4 million hectares. During the Plan period wheat will be grown on 200,000 hectares and an additional 270,000 metric tons will be produced. Emphasis will be given the use of improved seeds and chemical fertilizers. A 'Grow More Wheat' campaign will be carried out throughout Nepal.

Programmes for Cash Crops

Sugarcane

To meet the sugarcane requirements of the existing sugar factories and of those to be opened in the future, sugarcane output will be doubled. At present cane is cultivated on only 9 thousand hectares. Sugarcane can be cultivated on some 32 thousand hectares in Nepal. During the Third Plan period cane will be grown on an additional 5.7 thousand hectares in the districts of Bara, Parsa, Rupandehi, Kapilvastu, Banke, Morang, and

Sarlahi. Improved seeds will be used in the new areas as well as on the presently cultivated lands of Morang, Rupandehi, Kapilvastu, Bara and Parsa districts. Emphasis will be placed upon the proper use of fertilizers.

Jute

Jute is one of our main export crops; in trade beyond India, it is the most important. Present, jute is cultivated in Saptari, Morang, and Jhapa districts on 32 thousand hectares. During the coming five years, an additional ten thousand hectares will be sown with jute and annual output by 1969-70 will be 54 thousand metric tons. To increase output improved techniques, improved seeds, and chemical fertilizers will be used.

Tobacco

To meet the raw material requirements of the existing cigarette factories and export demands, tobacco cultivation will be expanded to cover an additional 15.5 thousand hectares over the present eight thousand hectares. The new areas of cultivation will be in the districts of Sarlahi, Saptari, Mahottari, and in parts of the Inner Terai. By the end of the Plan period annual production will reach an estimated 14 thousand metric tons. Improved techniques and improved seeds will be used in cultivation, particularly those seeds recommended by the cigarette factory such as Virginia Gold, Del Crest and Australist.

Oil-seeds

Oil-seeds, particularly mustard, are cultivated on 108,000 hectares. Annual production is estimated to be about 51,500 metric tons. To achieve the 18 per cent increase targeted for the Plan period, improved seeds and fertilizers will be applied to 30,000 hectares. Mustard will be planted on additional 7.5 thousand hectares in the districts of Chitwan, Nawalparasi, Dang Deokhuri, Bardia, Kanchanpur and Banke. Thus, an additional nine thousand metric tons of oil-seed will be produced annually.

Provision of Necessary Factors of Production

The above targets will be achieved by making advances in the following areas : (1) irrigation and soil conservation, (2) use of improved seeds, (3) fertilizer use, (4) crop protection and (5) use of improved techniques. These will be responsible for output increases of 3.5 per cent, five per cent, one per cent, and 0.5 per cent respectively.

Small Scale Irrigation

During the Second Plan additional 40,628 hectares of land were irrigated by various projects. In the Third Plan 175,000 additional acres of land will be irrigated by various large-scale projects.

Large-scale irrigation projects now supply water to 26,000 hectares of cultivated land ; similar projects will irrigate another 160,000 hectares by the end of the Third Plan.

Large-scale irrigation facilities are not only expensive but also time-consuming to construct. On the other hand, minor irrigation schemes are less expensive. Cultivators can put forth their joint efforts to secure additional water. Since the policy is that 50 per cent of the cost of minor irrigation is borne by the cultivators who use the facilities, more attention is given to proper use and maintenance.

In view of the experience during the Second Plan the area to be covered by minor irrigation during the Third Plan will be 45,900 hectares. In addition, in the Terai and the hills, irrigation will be undertaken with tube-wells and other arrangements.

Soil Conservation

As a result of indiscriminate felling of existing forests and transient cultivation practices in some areas, soil erosion has become a major problem in the hills. Therefore, soil conservation will be one of the programmes to be undertaken in the Plan period. Wherever possible soil conservation schemes will be carried out along with minor irrigation programmes. In this way not only will the soil be protected but additional water will be made available. Under the combined soil protection-irrigation programme, 21,400 hectares will be affected.

Improved Seeds

Higher yielding seeds are important in increasing agricultural production. Improved seeds result in larger output and in crops which can be stored for longer periods. During the Plan, 55.5 thousand metric tons of foodgrain seeds and 96.5 thousand metric tons of cash crops seeds will be required. A five per cent increase in foodgrain production will be achieved by the use of improved seeds on 800,000 hectares. The eleven agronomy farms established during the Second Plan will produce 248 metric tons of seed. In the Third Plan, four additional agronomy farms will be established.

Research and experimentation on seed varieties will be undertaken on the new farms. After experimental work is completed, the nucleus seeds will be grown on government farms and distributed among the registered seed producers. The seed producers in turn will grow the improved seeds under the guidance of the technical advisors to be provided by the government. A system of seed growing will be established. To encourage seed cultivators, seeds will be purchased from the growers at incentive prices and distributed to the cultivators through the extension service.

Chemical Fertilizers

To increase production, the fertility of the soil must be maintained and improved. To achieve this the plan calls for the use of 108,076 tons of ammonium sulphate, 25,672 metric tons of potassium and 87,467 metric tons of phosphate. By 1969-70, a total of 86,262 metric tons of chemical fertilizers will be required annually. At present the application of chemical fertilizers is very limited. As chemical fertilizer use is relatively unknown to the cultivators, a considerable time period will be needed before chemical fertilizer will be extensively used. Cultivators will be encouraged to use them and to grow more than one crop. Because of transport difficulties emphasis will be placed on the regions where such facilities already exist. Marketing and distribution channels must be established. Moreover, the fertilizer requirement during the Plan is very large compared with present use. Therefore, agreements should be made well in advance with fertilizer exporting countries.

In addition to chemical fertilizer, compost, which can be produced within the country, and green manure are also important in increasing production. As the latter types of fertilizers are known to the cultivators, it should not be difficult to expand their use. Encouragement will be given the production and use of green manure.

Plant Protection

An estimated 15 per cent of the total crop production is destroyed by plant diseases and insects. Thus, a corresponding increase in the Plan period could be achieved if the crop were fully protected from damage and destruction. However, it is not possible to carry out such a program for the entire country within a few years. During the Plan period, plant protection will be carried out on 150,000 hectares covering paddy, maize, sugarcane, jute, tobacco and potatoes.

Insects such as borers, afids, and others will be controlled by the use of metatox, folidol, and aldrin chemicals. A plant quarantine program will be carried out to prevent the spread of plant diseases.

Agricultural Implements

Although some cultivators realize the importance of agricultural implements in increasing output, improved implements are not produced in Nepal but are imported from India. However, they are not suitable to the soil and climate of the country. For example, the Indian plough is unsuitable because of the size of the local bullocks. Therefore, an agricultural implements research and production centre was established in Birgunj during the Second Plan. This factory produced and sold 4,500 implements and tools. Since this output is very small in relation to the market, the, target for the Third Plan is the establishment of another one or two agriculture implements production and training centres. These plants will produce some 10,000 implements of various types. In addition, the agricultural supply corporation noted below will market various agricultural implements on a commercial basis.

Agriculture Supply Corporation

An Agriculture Supply Corporation will be established at the beginning of the Plan period to make available improved seeds, fertilizers, insecticides, and agricultural implements. This Corporation will distribute improved seeds. It will also produce, collect and procure improved seeds, test for purity, protect from insects, and grade the seeds. In addition, the Corporation will make available chemical fertilizers, pesticides, agriculture implements, etc. For this, the Corporation will have to keep in close contact with the National Trading Company and, distribtution and extension services, with the Agricultural Department and Cooperative Banks. Its activities should also be coordinated with the agricultural extension and land reform programmes.

Horticulture Development

Nepal has tropical, sub-tropical, and temperate climates which are suitable for horticulture development. The lower regions of the Himalayan belt and the central regions of the country are better suited for the growing of fruits and vegetables than other agricultural products. The Second Plan gave priority to the development of horticulture. By the end of the Plan period, horticulture development centres and orchards were opened in the following places :

Kirtipur
Kakani
Parwanipur
Dhankuta
Rapti
Trisuli
Daman
Thak
Godavari
Dhunibesi
Biratnagar
Janakpur
Helambu
Pokhara
Baitadi
Ilam

These centres and orchards conduct experiment and test plants to determine the varieties most suitable to various climatic areas. They also sell plants to the public. During the Second Plan they sold 40 thousand improved fruit saplings, 60 thousand banana, pineapple, other fruit seeds, and 7 thousand kilograms of improved vegetableseeds to the cultivators. Because of the importance of horticulture, seven new centres will be established during this Plan period. This will increase the number of centres to [illegible]. These centres will produce some 760,000 fruit grafts during the plan period. By 1969-70, they will be producing 230,000 fruit grafts annually.

Vegetable production will be doubled during the Plan period. For this, various vegetable development programmes will be undertaken. Improved vegetable seeds totalling 24,000 kilograms will be produced and sold to the cultivators. Insecticide services will also be provided. Vegetable growing centres will be opened in various parts of Nepal. In Ilam, where potatoes are the main crop, a potato development centre will be established which will produce disease-free stock. During the Plan period, the production of potatoes will be increased by 20 per cent.

In addition to the production of fruits and vegetables, attention must be given to their preservation. A preservation centre was established at the Kirtipur Horticulture Centre during the Second Plan. Fruit from Dharan, Dhankuta, Pokhara, etc. is brought to this centre where it is tested, canned and sold. In the Plan period, this centre will be expanded and a similar centre will also be established in Dharan.

Tea plantations in Nepal, especially in the eastern region of the country, appear to be profitable. A Tea Development Board will be established during the Plan period. This Board will manage the tea gardens in Ilam and Soktim. The Board will replant old tea gardens and establish nurseries to provide seeds. It will also encourage private investment in tea plantations.

Livestock, Poultry and Fish Improvement

Since three-fourths of Nepal is covered by hills and mountains, there is great potential for livestock development. Pastures in the hills can be extensively developed, although relatively few areas are being used at present. Moreover, the northern part of the country is at a higher elevation and thus is less suited for foodgrain development. Therefore, livestock improvement will be emphasised in these regions.

Cattle

As yet, no substantial progress has been made in this field. However, in view of the importance of cattle to the economy, greater stress will be given to this sector in the Third Plan. Brown Swiss, Jersey, Red Sinthi, and other breeds will be used to improve local cows and increase milk production. Stronger bullocks will be developed. The four cattle farms will be expanded and one new unit established. A horse farm will be established in Phidim, Mechi Zone, to improve breeds.

Sheep

Sheep herding is one of the oldest occupations in the country. In the Himalayan belt, there are many families who raise sheep for their livelihood. But, as a result of lack of knowledge of modern techniques and the poor condition of pastures, sheep production has been declining in recent years. Sheep are being imported to meet the meat and wool requirements of the expanding population. A sheep farm was established in Pokhara during the Second Plan in order to improve the local stock by proper feeding, care, and breeding. The experience of this farm shows that a higher altitude area is required for this purpose. A new sheep farm will be established near Kathmandu during the Plan period. Pastures will be developed to encourage sheep farming. Technical and financial assistance will be given to those interested in undertaking sheep farming on a commercial basis.

Swine

Although swine production is a very old activity in Nepal, modern methods are just beginning to be adopted. Pigs imported from the United States for breeding purposes have helped improve quality. Pig farms established in the Rapti and Jiri Valleys have made considerable progress. Under the pig chain programme, farmers have been given pigs to raise. The work in this field is progressing well.

To meet the increasing meat requirements of the people, pig raising on a commercial basis has excellent prospects. Therefore, the farms in Rapti and Jiri will be expanded. New farms will be established in Kathmandu, Biratnagar and Bhairawa, which will make available improved stock to the various regions of Nepal. Some 5,000 pigs will be distributed every year.

Poultry

Poultry raising has proved to be a successful and profitable business. In the beginning of the Second Plan, there were only ten poultry farms. By the final year of the Plan, this number had increased to 400. The hatchery at Parwanipur with a capacity of 60,000 could produce only one-third of the requirements of the poultry farms.

The transportation of day-old chickens to all areas of Nepal is difficult. To overcome this problem and to meet the expanding demand, four hatcheries, one each in Kathmandu, Biratnagar, Bhairahawa, and Nepalgunj, will be opened during the Plan period. The Parwanipur hatchery will be expanded to a capacity of 80,000 chicks a year. These hatcheries will produce a total of 1,100,000 chicks during the Plan period. By 1969-70, the annual capacity will be 300,000.

Fishery Development

Fishing in Nepal is still unrestricted. Fish are taken from the streams with the use of dynamite. This should be stopped.

In the Second Plan, fast growing carp were imported. Israeli carp breeding centers are established at Godavari, Janakpur, Pokhara, Parwanipur, Bhairahawa and Biratnagar. The fingerlings were made available to stock ponds. It is estimated that fish production during 1962-65 in both the private and public sectors was 100 metric tons. During this Plan period two additional fish breeding farms will be opened.

The increasing demand for fish as a result of increased incomes has made it essential that fish farming be undertaken on a large scale. A commercial fish farm of 25-40 hectares will be opened at Hetaura to produce fish for sale to customers. By the end of the Plan annual fish production from these farms will be 285 metric tons.

Veterinary Services

The provision of veterinary services is one of the major requirements for agricultural development. During the Second Plan, veterinary services were made available throughout Nepal by opening clinics and hospitals in various areas ; 33 dispensaries and veterinary hospitals are now operating and a research center was established to produce vaccines. Mass vaccination has been undertaken to eradicate rinderpest. The present Plan aims at making more veterinary facilities available and at opening 12 dispensaries in the less accessible regions of the country. Four check posts will be opened at Butwal, Dharan, Hetaura and Darchula. By the final year of the Plan, the newly established research center will be producing a broad array of animal vaccines.

Dairy Farming

Dairy development has not been given necessary attention. However, there has been progress in cheese production. The cheese factories at Ilam

No. 2, East No. 3, and West No. 1 have made considerable progress. Production for the past three years is estimated at some 26,000 kilograms of cheese. A cheese processing plant has been installed in Kathmandu. Nepali cheese has gained a good reputation in foreign markets. During the Third Plan, eight new cheese factories will be established. These will produce 30,000 kilograms of cheese annually and increase the incomes of 500 yak raising families in the northern part of Nepal. It is estimated that annual cheese production will be 46,000 kilograms by 1970.

At present, a dairy center is located in Kathmandu. This center collects, processes and distributes 500,000 liters of milk. Efforts will be made during the Plan to increase milk production in Kathmandu Valley and milk will also be collected from outside the Valley. Once this is done the Kathmandu Central Dairy will have a processing capacity of 10,000 liters per day.

Carcass Utilization

Presently there are inadequate facilities to utilize animal carcasses. Facilities are needed to get maximum benefits. Such plants are needed to make use of carcass components which would otherwise be wasted. These can be processed into fertilizer and contain proteins which may be used as animal feed supplement. Therefore, carcass utilization plants will be established in selected areas during the Plan period.

Artificial Insemination

The number of cattle in Nepal is estimated at 7,300,000. Breeding must be improved. The livestock improvement programme is designed to improve local breeds. To achieve this, an artificial insemination programme was started five years ago. According to the report on this programme, 70 per cent of the artificial inseminations have been successful. However, there has been relatively little effect upon cattle quality. In the present Plan period, this programme will be gradually expanded. In areas where the programme is operating the stray bulls will be removed. Activities will be concentrated in villages and districts where livestock farms and/or veterinary branches exist. Ninety thousand cows and buffaloes will be artificially inseminated during the Plan period.

Programmes Relating to Agriculture

In addition to the items mentioned above, the agriculture development programme includes other activities. Their purpose is to support and evaluate agriculture development programmes. Some of the main programmes are described below.

Agriculture Research

Research activities will be undertaken in the various sections of the Agriculture Department. Work will be done to determine suitability in Nepal of agricultural techniques that have been successful in other countries. Efforts will be made to provide the cultivators with help in increasing agricultural production, i.e. by improved seeds, plants, livestock, implements, fertilizers, and similar factors. Some of those factors will be produced on the farms and units of the department and sold to the cultivators. Items which cannot be produced within the country, such as chemical fertilizers, seeds, and insecticides, will be imported.

Training

Middle grade technicians are being trained at the Agriculture School. They are trained to assist the cultivators in making the best use of available resources. At present, the trainees are given diplomas in agriculture and home sciences. There are also short-term training facilities for fieldmen, field assistants, etc. During the Second Plan 680 were trained.

Most of the high level technicians required in Nepal—doctors, engineers, and agriculture specialists—receive their training in India. Some 10—15 agriculture technicians are returning from India every year. With the expansion of agricultural activities, high level manpower requirements will also increase. To meet the targets set forth in the Plan, 250 advanced (graduate) and, 1,400 middle grade (JTA) technicians will be required. In view of the increased demand, 50 persons will be sent to India and abroad for technical training during the Plan period. The middle grade technicians will be trained locally. An agriculture College will be established during the Plan period.

Agricultural Extension

Agricultural production will not increase unless improved techniques are adopted by the cultivators. This will not be possible unless a link is established between the experimental stations and the cultivators. Contact between these two groups is maintained through agricultural extension. Under this programme, middle grade technicians go into the field and demonstrate various improved techniques to the cultivators. When problems arise, those technicians ask the relevant technical sections for advice.

At present there are 120 agronomy JTAs; nine Home Science JTAs and 29 other JTAs who are responsible for extension activities in the various districts. These technicians work under the guidance of the district panchyats. To provide technical assistance to these JTAs, one agricultural extension officer is stationed in each zone. Unless the various factors of production such as improved seeds, fertilizer, insecticides are available, technical advice is not effective. To make these factors available at the right times and places at a reasonable price, supply centres will be established in various areas. Extension serivces will cover 900,000 hectares during the Plan period.

Agriculture extension to date has not been very successful because of the lack of transport facilities, technicians, coordination with other developmental programmes, improved seeds, fertilizer, credit and efficient administration. Necessary steps will be taken to overcome these difficulties. The extension program will also undertake a campaign to stimulate the production of wheat and vegetables.

Extensive publicity on agricultural problems and their solutions is necessary. Therefore, a publicity programme has been included in the Plan. This will be managed by a separate section.

Agricultural Economics and Statistics

The purpose of this programme is to collect agricultural and related data and to study the potential of agricultural industries. This programme will also study and analyze land use, crop production, livestock use, weather conditions, prices of agricultural products, marketing systems, the village economy, cultivation techniques, etc. Grading of agricultural products and quality control will also be started. Although agriculture is a vital part of the economy, there is inadequate data on agriculture at present. To undertake effective programmes, much more data is needed. Efforts will be made to gather as much data as possible.

Resettlement Programme

Since the non-agricultural sectors of the economy are still undeveloped, increases in population must be at least partially absorbed in agriculture. Population pressure on land is severe in the hill regions. It is less serious in the Terai since there are still cultivable lands available. People have been moving out of the hills into the Terai. They clear the jungles and settle wherever they can. Often these people move from one place to another, clearing a different area of the jungle each time. This kind of unorganised clearing and cultivation reduces the forest resources of the country.

Progress made up to the present time

The first organised resettlement programme was started by His Majesty's

Government in the Rapti Valley during the First Plan. Under this programme, 10,000 hectares of land were distributed for the settlement of 5,000 families. Other facilities such as schools, hospitals, and market areas were also made available.

During the Second Plan, additional families were resettled. In the Nawalpur project in Lumbini zone 700 families were resettled on 1,850 hectares.

Programme under the Third Plan

During the Third Plan, population is expected to increase at the rate of 150 thousand annually. Of this, ninty-five thousand will occur in the hill regions. This will place even greater pressures upon cultivable land in the hills. To help reduce the pressure, 6,000 families will be resettled on 13,900 hectares of land in Banke, Bardia, Kailali Kanchanpur and Udaipur districts during the Plan period.

CHAPTER VIII

Land Reform and Land Administration

The objectives of the present Land Reform programme in Nepal are to ensure a fair share of the fruits of his production to the cultivators by putting an end to exploitation, and to encourage labour and capital to shift from agriculture to other sectors. These objectives are not limited to an equitable distribution of present production alone. The cultivators will be given greater incentive to increase production. This encouragement will be in the form of tenancy rights, low cost credit and the opportunity to retain the profits of their increased effort.

The Land Reform Act of 1958 and the Birta Abolition Act of 1960

Land Reform legislation was first passed in 1958. The Act called for fixing maximum rent at 50 per cent of the yield, imposing a ceiling on interest rates at 10 per cent, eliminating forced labour, and providing security of tenure for those who had tilled a given piece of land for more than a year. This Act could not be effectively implemented because of the absence of adequate records of land ownership ; no sources of credit other than the landlords and merchants ; and, above all, the absence of efficient land administration.

The Birta Abolition Act of 1960 and the Estates Abolition Act of 1963 also deserve mention. According to the Birta Abolition Act, all the lands which were entirely or partially exempted from land revenue were removed from that status. The ownership of these lands was assumed by His Majesty's Government. Under the Estates Abolition Act all estates were dissolved.

Despite these measures the condition of the cultivator did not improve. Lack of tenancy records, the limited number of cooperative societies, and the slow progress of the cadastral survey were some of the barriers.

The specific objectives of the present Land Reform programme are : to prepare full records of tenancy, to provide alternative sources of credit to expedite the progress of the cadastral survey work, and to establish an efficient and modern system of land administration. Although a majority of the people in Nepal own some land, much is owned by relatively few people. This fact has direct bearing upon agricultural production, particularly in the Terai region. Moreover, the presence of middlemen in the land system affects the income of the peasant. The final impact of the evils of the existing land system is upon the peasant. Though the function of the Zamindari system was to help the government collect land revenue, it became a means of exploitation. Therefore, the abolition of the Zamindari system is essential to Nepal's development.

The Land Reform Act of 1964

A new land reform measure was enacted in 1964, which is of major importance from the economic and social points of view. Rights of both landlords and tenants have been secured by this Act. The salient features of the Act are :

1. Abolition of the Zamindari System.
2. Ceiling on land ownership of 17 hectares in the Terai, 4.11 hectares in the hills, and 2.67 hectares in Kathmandu Valley.
3. Ceiling of tenancy holdings of 2.67 hectares in the Terai, 1.02 hectares and 1.51 hectares in Kathmandu Valley and the hills respectively.
4. Security of tenancy rights.
5. Fixing of rent at no more than 50 per cent of production.
6. Abolition of sub-tenancies.
7. A compulsory savings program to provide an alternative source of credit, and the interception of loan repayments to private lenders.

Progress to Date

A considerable period of time is necessary to implement the above listed provisions on a national scale. The Land Reform Programme had been implemented in 16 development districts[1] by the end of the Second Plan. The programme will cover the rest of Nepal in the first few years of the Third Plan. In nine of the 16 districts in which work was undertaken during the Second Plan, cadastral survey work was carried on together with the identification of tenants and the distribution of provisional certificates of tenancy. These provisional certificates will be replaced by the issuance of permanent certificates at a later date.

Other phases of the programme—fixing rent, collecting data on production, preparing tenancy records, recording debts, collecting compulsory savings deposits, intercepting debt repayments, and acquiring land in excess of the legal ceiling or holdings—are also underway.

To date, the cadastral survey has covered 57,333 hectares of land in 250 Village Panchayats. Records for 182,000 tenants have been completed. Provisional certificates of tenancy rights have been issued to 64,500 tenants.

In seven districts, activities such as the preparation of debt records, tenancy holdings, compulsory savings collection, and the organization of ward committees for the interception of loan repayments are in full swing. Savings in kind have amounted to 31,481.17 metric tons, and in cash to Rs. 850,000. Records have been compiled for more than 300,000 contributors. The loans advanced by these committees to the peasants have amounted to Rs. 85,000 and 851.22 metric tons in cash and in kind respectively.

Difficulties Faced by the Programme

The preparation of land records and the identification of tenants is progressing satisfactorily. This achievement can be ascribed to the existence of special courts. However, the forced eviction of tenants from land in some of the districts has become a major problem. Delay in cadastral survey work is another obstacle to the progress of the Land Reform programme. The cadastral survey work, which will be discussed later, should be separated from the Land Reform programme. The Compulsory Saving Scheme is progressing satisfactorily. The realization of debt repayments from the cultivators is not satisfactory. It may be attributable to the fact that this work was started after the harvest season.

The Land Reform Programme under the Third Plan

The Land Reform Programme will be completed in the early years of the Plan. Tenancy rights will be secured and an alternative system of credit will be established. The cadastral survey work, redistribution of excess holdings, establishment of land administration, permanent credit facilities and agriculture development work will be continued through the Plan period. Since one goal of the programme is to improve the economic condition of the cultivator by giving him land ownership, efforts will be made to realise this goal in the Third Plan period. Cadastral survey work on all cultivated land and the creation of an efficient and modern land administration system is of special importance.

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[1] The 16 development districts are Kathmandu, Lalitpur, Bhaktapur, Kabhre Palanchowk, Sindhu Palanchowk, Nuwakot, Dhading, [illegible], Bara, Parsa, Rautahat, Bardia, Kailali, Jhapa, Chitaun and Makwanpur.

Cadastral Survey

Land revenue assessment in Nepal is based upon many factors. The quality of seed used on the land, the area of land that can be ploughed by a pair of oxen in a day, the area of land that can be dug by spades in a day, and chain measurement are some of the bases for assessment. The present records are not accurate since they do not correspond to data secured by actual measurement. The need for an accurate cadastral survey is apparent. Its main purpose is to determine the boundaries of the land and to classify the land properly.

Cadastral survey work in Nepal was started before 1923 but no maps were prepared on the basis of the surveys. From 1938 to 1947, six districts were surveyed using the plain table method. During the First Plan period, only 434,000 hectares of land were surveyed and 134,400 hectares registered. This was considerably less than the plan target of 55 per cent of the total cultivated land. During the Second Plan, maps were prepared for 385,200 hectares, 512,400 hectares were registered, and land records were prepared for 490,400 hectares. The Plan target was 801,717 hectares of land.

The progress of the cadastral survey work has been slower than anticipated and the methods are technically unsatisfactory. Adequate data regarding tenancy was not collected except for that part of the cadastral survey work conducted under the Land Reform programme. An additional 799,880 hectares of land will be surveyed during the Third Plan. The target which has been set considering the capacity of the existing facilities is relatively low. Additional surveyors will be trained during the Plan period.

Land Administration

The data collected under the cadastral survey programme will reveal the amount of land on which land revenue payments are less than full assessment or are not recorded at all. This will provide a sound basis for increasing revenue together with the establishment of an efficient land administration unit. The need for such a unit is also clear from the fact that the administration of land should be coordinated with the land reform programme. Resettlement on newly reclaimed land is also necessary. In view of these considerations, His Majesty's Government has decided to establish a separate department of land administration. The activities of this department will be initially limited to those districts where the land reform programme is underway.

CHAPTER IX

Agricultural Credit and Cooperative Development

Credit facilities have an important role in the development of agriculture. The present agricultural system cannot be improved without credit.

There are various kinds of credit required in Nepal. Short term credit up to one year is needed to provide the farmers with improved seeds, fertilizers, and small tools and for payment to labour hired for planting and harvesting. Medium term credit for three to five years is needed to finance tubewells, land clearing and large implements. Long term credit is required to develop new lands and to buy farm machinery.

Only short and medium term credit can be provided under the present system. The government has provided long term credit for settlement of new lands. However, there is no established system of providing such credit. Landlords and merchants are the main sources of credit. Credit given by these private sources becomes a means of exploitation. At present the development of cooperatives is in its initial stage in Nepal. The amount of credit provided by the cooperatives is small because of the difficulties of administration and loan processing. One of the objectives of the Land Reform programme is to make credit available at reasonable interest rates.

Development of Cooperatives

Cooperatives have an important role to play by bringing together small cultivators with their limited resources. The financial condition of most cultivators is very poor. Their position is worsened by the interest rates and other conditions imposed by private credit sources. The experience of other developing countries indicates that plentiful credit at reasonable interest rates stimulates development. This can be a major contribution of the cooperatives. Therefore, the agiculture system will be developed through cooperative organizations. They will make credit available at reasonable rates of interest. In the Rapti Valley resettlement program, landless cultivators were given credit through cooperatives. A total of 1109 cooperative societies, cottage industry and consumer cooperatives, two District consumer institutions, and 14 district-level marketing and credit cooperatives were established during the last three years.

Program for the Third Plan

There are various reasons for the slow progress of cooperative development to date. Most of the farmers are illiterate and poor. Under these conditions it is difficult to develop administrative skill necessary for the development of cooperatives. The present number of organized cooperative committees and the volume of field activities is limited. Because of these small scale, societies find it difficult to work commercially. Again, if the societies are limited only to credit, they cannot provide full benefit to the cultivators. Therefore, expanded field work and the establishment of production and marketing societies are necessary.

Three hundred fifty large multipurpose cooperatives will be established during the Third Plan. These will not be limited to credit but will also be marketing and supply units as well and encourage cottage industry development and undertake management of godowns. These institutions will be organized in those districts where land reform work is underway. One cooperative institution will be organized for each village Panchayat.

Efforts will be made to develop experimental cooperatives in the agricultural sector. For this purpose, ten agricultural cooperatives with a total of at least 1,000 families will be organized. In addition, ten consumer institutions in urban areas and 75 industrial cooperatives will be established. Emphasis will be given to paper, metal working, carpets, textiles, ceramics, nickle-plating, soap, curios, carpentry, furniture, and fruit canning activities for the industrial units.

In total, 545 new cooperatives will be organized. A total of 30 cooperative federation will be established at the district level to provide management assistance and to coordinate the activities of the primary institutions. A national federation will be organized with the district units as members.

Coordination with the Land Reform Programme

A multipurpose cooperative will be established in each village panchayat where full implementation of the Land Reform programme has taken place. Resources to assist these multipurpose institutions will be provided. Only a limited number of cooperatives will be established over the next five years because of administrative limitations. These institutions will be supervised by a committee with representatives from each ward.

The cooperatives will assess the members, prepare agricultural development plans, collect savings, supply consumer goods and manage godowns. As the primary institutions are the base of the cooperative movement, efforts will be made to solve the problems faced by these units and to meet their financial needs. Government activity in this field will be conducted through these institutions.

Cooperative Organisation

A nationwide cooperative federation will be organised. It will prepare and implement a coordinated programme of cooperative activities. District cooperative federations will be established and will be members of the national federation. Village panchayat cooperatives will, in turn, be members of the district federations. The district units will provide funds for credit purposes and assist in marketing agricultural products.

Training

Trained personnel are needed for efficient operation of the cooperatives. In the absence of such personnel, cooperative development will suffer. Developmental staff and higher society officials will be trained. Short term training will be given to cooperative auditors and sub-inspectors. The managers of the village panchayat cooperatives, supply and marketing supervisors, ward supervisors, and supply officers will also be trained.

Banking Facilities

The present Cooperative Bank will supply loans to the farmers through the cooperative institutions. This bank was established in 1963. It has a major role in providing necessary credit for the development of cooperatives and the successful implementation of the Land Reform programme. It presently has more than Rs 2.9 millions of paid up capital. The bank has played an important role in Jhapa District. Eleven godowns at Jhapa, Nepalgunj and Biratnagar have been constructed with the assistance of the bank. The godowns have a total capacity of 8,000 maunds. Loans totalling

Rs 100,000 were made available for the resettlement program at Nawalpur. Short term loans have been made available to buy improved wheat seed.

Credit facilities will be made available only to those areas where the land reform programme has been effectively implemented. The Bank will also handle the compulsory savings under the land reform programme, and credit requirements for land resettlement schemes. It will also assist cottage industry development.

The Cooperative Bank will make loans to cooperative societies. Various difficulties facing cooperative development were mentioned earlier. Agricultural development cannot depend on solely cooperative credit. There is no provision to meet the credit needs of agricultural industries which are of major importance to rural development. These include dairying, sheep grazing, etc. During the Third Plan, an agricultural bank will be established to provide credit for the development of commercial agriculture. A sum of Rs 50 million will be made available for lending by the two banks over the next five years.

CHAPTER X

Foodgrains

The Agriculture Census of 1961-62 indicated that 20,11,664 metric tons of food grains (paddy), wheat, maize, millet, etc. were produced in Nepal. As the average annual consumption in Kathmandu Valley and the Terai is 197 kilograms and in the hill areas 180 kilograms, total requirements come to 1,754,064 metric tons. The surplus food grains amounting to 257,600 metric tons are exported. Although there is an overall surplus of food grain production in Nepal, some areas of the country, particularly Kathmandu Valley and the hill areas, have a deficit. Because of lack of transportation facilities, it is difficult to transport food grains from the Terai to the hills. The surplus production of the Terai is exported southward. If more storage facilities are provided in both surplus and deficit districts, more will be moved into the deficit areas.

As there are no quality standards and inspection of food grains, adulteration is practised to the detriment of the people. If quality controls are effectively imposed, it will be possible to secure higher prices to the cultivators and reduce wastage. The following programmes are included in the Third Plan.

Godown Construction

The paddy production of the country is 2,200,000 metric tons in 1964/65 out of which the Terai produces 1,500,000 metric tons. The surplus in this areas should be used to supply the deficit hill areas. The surplus can be exported at higher prices. Therefore, His Majesty's Government has given priority to the construction of godowns during the period. The processing capacity of the rice mills in Nepal is 1,000,000 metric tons of rice from 1,500,000 tons of paddy. In the absence of godowns, the rice and paddy are exported right after they are harvested. Food grains are imported later to meet the requirements of the people.

Godowns with a total capacity of 21,575 metric tons have been completed in 12 districts during the Second Plan period. An additional 43,775 metric tons of capacity will be constructed in the hill regions during this plan period.

During the first year, 19 godowns, with capacities varying from 75 to 500 metric tons will be built in 13 districts. These will have a total storage capacity of 6,850 tons. In the second year 27 godowns will be constructed in 23 different districts with total storage capacity of 6,850 metric tons. In the third year 11 godowns with a total of 6,000 metric tons will be built during the fourth year. Five godowns with a storage capacity of 2,500 metric tons will be built in four districts.

The construction of these godowns should make it possible to meet more adequately the requirement of the hill districts. If the surplus food grains can be stored in Nepal, they can be exported at higher prices. With the completion of these godowns, market prices of food grains can be stabilised since buffer stocks can be maintained.

Food Grain Marketing

His Majesty's Government will undertake the distribution of food grains from surplus to deficit districts. Government will also export food grains. This activity will be expanded as more experience is acquired and administrative capacity is built up.

Food Research

The construction of food laboratory will be started during this plan period. Data will be collected on rice milling operations. Research work to reduce food grain damage and loss will be conducted. Studies will be made of possible uses of rice mill waste.

The possibility of developing a fruit canning and processing industry will be studied. Experiments on fruit and vegetable preservation processes will be undertaken.

Food inspectors will be trained and posted in various districts to prevent adulteration of foodstuffs.

CHAPTER XI

Forestry and Botany

Forestry

Forests and wild animals are among the important natural resources of Nepal. The major benefits to be accrued from forest are not only soil protection, timber and fuel but also raw materials for local industrial use and for export. Therefore, forest must be carefully planned and managed.

Progress in the Second Plan

Some of the important forest development achievement during the Second Plan were : Construction of 3040 kilometers of forest demarcation lines in nine hill divisions and thirteen Terai divisions ; 440 kilometers of fire lines; 480 kilo meters of forest trails; and reforestation on 2,484 hectares in Kathmandu, Trisuli, Chautara, Ilam, Pokhara, Salyan and Lumbini areas. In addition, a survey has been conducted to determine the forest wealth of the country and to create a sound base for forest exploitation. Wild life refuges have been established at Chitwan, Kanchanpur and Dhanagadi. Under training programme one hundred and twelve rangers and 214 foresters have been trained.

Third Plan

Projects undertaken during the Second Plan will be continued and other activities will be started.

Forest Resources Survey : These are : In order to carry out forest management scientifically after evaluation of the nature and condition of forest and its timber volume as well forest survey undertaken in the Second Plan will be continued. This will facilitate national forest products utilization in the future.

Demarcation: The forest boundary demarcation work started to check the misuse of forest and to develop forest resources along scientific line will be continued. An additional 4,000 kilometers of forest demarcation lines will be constructed during the Plan. This will consist of 2400 kilometers in nine hill divisions and 1,600 kilometers in 14 Terai divisions.

Fire Protection : Four hundred and eighty kilometers miles of fire lines under 16 divisions will be constructed during the Plan to reduce the damage done by fires. During the dry season a team of ten forest guards will be assigned to each division to provide fire protection.

Forest Road Construction : Forest roads are essential for forest protection and also transporting the forest products. Moreover, such roads will be constructed in this Plan period and steps will be taken to maintain the existing ones. Bridges, culverts and drains will be constructed whereever necessary. During the Plan period, a total of 1200 kilometers of fair weather road will be built.

Afforestation : Afforestation programme has been launched in these areas where forests are destroyed annually. Additional 10,121 hectares of land will be afforestated and turned "trail plots" will be established in this Plan period.

Wild Life Protection : At present two wild life refuges are under construction to protect wild life, particularly the rehenocerous. Two more will be constructed during the Plan period. Arrangement will be made to establish national parks in the protected areas.

Soil Protection : In many parts of the Hill region, fertile soil is washed away by water. Reforestation programmes to control soil erosion will be undertaken in selected areas.

Silviculture : So far no attention has been paid to this matter. Work on the silvicultural treatment of forests will be started. This involves creeper cutting, thinning, felling improvement, removal of unwanted species and weeding.

Research : Forest research work will be undertaken to gather more knowledge of forest resources for the utilization and its development.

Forest Research : During the Third Plan three research stations will be established ; one each in the Hills, Inner Terai, and Terai. Experimental work will be undertaken on different species. The stations will also study soil conditions and forest insects in cooperation with the Agriculture Department.

Forest Extension ; Many village people of Nepal earn their living from the use of neighbouring forest areas. To avoid forest depletion, to stimulate village interest in forest protection, and to educate the people on modern tree plantations, a forestry extension programme will be undertaken during the Plan. The requirement of more trained technicians is being felt for the protection, exploitation and development of forest resources. The FRI will increase its existing capacity to train more forest experts.

Training : Every year 35 rangers and 70 foresters will be trained at the centre in Hetauda. In addition, short term training will be given to existing staff. More will be sent abroad for advanced training.

Miscellaneous : The organization and administration of the Forestry Department will be improved and strengthened. Buildings will be constructed to meet the requirements of the department.

Botany

The major objective of the Botany Department is to utilise the country's medicinal herbs and to create a base for the establishment of pharmaceutical industries. Herbal training and collecting activities have been put into operation for a number of years. A Botanical Department was established for the utilization and development of the herbs and medicinal plants in Nepal. Because of fund shortage and technical personnels, work could not be started in a systematic order in this field. It was as recently as 1961 that a plan was approved and the department was renamed after the Department of Medicinal Plants. This department is consisted of five sections viz. Royal Drug Research Laboratory, Royal Botanical Garden, Herbal Farm, Botanical survey and Trading centres. A national botanical survey has been conducted to ascertain the variety of medicinal plants in Nepal. Medicinal plants will be grown on the herbal farms and necessary processing will be undertaken at the laboratory. Farmers will be provided financial and technical assistance to encourage them to grow medicinal plants. Due attention will be paid for the development of this aspect in order to strengthen the economy.

Satisfactory progress has been made in the past few years in pharmaceutical development. The Royal Research Laboratory has been established to analyze and conduct experiments on various drugs. Two regional laboratories have been set up at Nepalgunj and Hetauda. In addition seven herbal farms in different climatic regions (Shreepur, Manichuda, Dhunge, Tistung, Daman, Dharan, and Hetauda) have been established. Two herbal trading centres at Kathmandu and Nepalgunj have been opened to market processed herbs. During the Second Plan period botanical survey work was undertaken in Kavre Palanchok, Ramechhap, Okhaldhunga, and Bhojpur. In the West the Baglung, Muktinath, Mustang, Jumla, Doti, and Baitadi areas were covered. A survey has been completed in Bardia in the Terai and in Chisapani Gadi in Bagmati zone. A botanical garden has been established in Godavari for the protection and demonstration of various plants, compilation and preparation of herberian sheets are being carried out.

Third Plan

The botanical survey and other development work undertaken in the Second Plan period have created a base for the future programme. During the Third Plan the following activities will be carried forward :

Royal Drug Research Laboratory : The activities of the Research Laboratory will be expanded to include experimentation on various drugs. Production of various medicines and useful oils will be undertaken on an experimental basis from the herbs found in Nepal. Three new regional laboratories will be established during this Plan period. The Research Laboratory will also provide technical advice concerning the establishment of a pharmaceutical industry in Nepal.

Herbal Farms : Measures will be taken to improve the present seven herbal farms and the work of propagating both native and foreign herbs will be continued. In addition five new herbal farms will be established in different climatic regions. During the Plan 5,000 additional acres will be brought under herbal farming.

Botanical Survey : The botanical survey, conducted in a few selected areas at present, will be extended to cover the entire country by the end of the Plan period. Information collected by the botanical survey will be published.

Herbal Trading Centre : The work of the Kathmandu and Nepalgunj trading centres has been satisfactory. Five other trading centres will be opened in the Terai during the Plan period. Besides providing incentives to herb growers, technical assistance will be provided to them by such centres.

Royal Botanical Garden : Improvements will be made in the Royal

Botanical Garden in Godavari. More new medicinal and ornamental plants from different parts of the country and from other parts of the world will be introduced. The garden will be extended and beautified in order to demonstrate both the economic and scenic advantages of herbal farming. One laboratory will be set up to find ways and means to protect plants, and greenhouse will be constructed for the preservation of plants. One, fern house, one cactus house, two orchid houses, one plan house, one office quarter, one staff quarter will be constructed during the Plan period. The extension of workshop, library and sales depot. will be undertaken.

Incentive to the Herbal Industries : Simple botanical survey and research work is not sufficient to exploit the herbal resources of the country. Maximum benefits can be derived only from the utilization of knowledge acquired from the survey and research work. During the plan period necessary technical assistance will be provided to private investors to open up new industries utilizing medicinal herbs or plants.

CHAPTER XII

Irrigation

A substantial increase in the productivity of the soil is essential to meet the needs of the people. The 10 million Nepalese people depend upon the produce of 2.3 million hectares of land. To make a significant increase in productivity, introduction of improved seeds and chemical fertilizers is essential, but the expansion of irrigation facilities is equally important.

Nepal has been endowed with abundant hydrological resources. The Kosi, Karnali, Gandaki and other rivers provide a continuous flow of water. Large and small river basis range from 1,300 to 6,500 sq. kilometers of territory. When the potential of these rivers is fully realized the quantity of drinking water, irrigation and power available in Nepal will multiply many times over.

Present Utilisation

It is estimated that about 25,101 hectares of land were under irrigation prior to the First Plan period. In the fiscal year 1961-62 an additional 26,397 hectares of land were brought under irrigation to make a total of 51,417 hectares land irrigation before the Second Plan. The target of the Second Plan was to irrigate another 57,287 hectares of land. Two third of the target was achieved by the end of the Plan period. The achievements by the end of the Second Plan period are shown in Table 19.

Table 19. Irrigation Projects Completed During the Second Plan Period.

Project	*District*	*Total Land Area*[1]	*Total Irrigated Area*[1]
	. .	(*Hectares*)	(*Hectares*)
Tinau	Palli Majh Khanda	20,243	14,170
Hardinath	Mahottari	3,644	1,943
Danduwa	Banke	3,644	1,943
Judhanahar	Rautahat	4,049	2,024
Kotkhu	Kathmandu	1,214	810
Godavari	Kathmandu	1,214	810
Bagmati	Kathmandu	344	324
Bosan	Kathmandu	607	485
Chandrenahar	Saptari	5,668	4,049
Total		40,627	26,558

Construction of the western Canal of the Kamala River Project and the Khageri Project at Rapti are in process. Preliminary work of the Mohana Canal has also been started.

Among the surveys undertaken during the Second Plan were (1) the further survey of the Kanchan, Danaba, Banganga and Bagmati Canal projects ; (2) the partial survey of the Babai and Kankai projects and (3) preliminary survey of the Sunkosi by the UN special Fund. Survey of many of the small rivers have been completed.

The Third Plan

The five projects started during the Second Plan will be completed during the Third Plan. The Bihul (Saptari) Project was not undertaken because of a lack of information on flow volume. The surveys of the Khatti (Saptari), Santollar (Palpa), Chope Nahar (Okhaldhunga) and Banepa projects were postponded because of technical and transport difficulties.

Targets in the Third Plan

Emphasis has been laid on irrigation programmes to increase agricultural production during the Third Plan period. The growing population demands higher agricultural output from Terai and irrigation opens an important avenue to reach these goals.

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[1] Total land area means the total land encompassed by the canal system of each project, although not all such land can be irrigated. Total irrigated land represents that portion which can actually be irrigated.

The Third Plan has a target of bringing irrigation facilities to 177,328 hectares of additional land, including 35,466 hectares to be double cropped.

Program in the Third Plan

During the Third Plan the following projects will be completed :

Kamala : Construction of the Kamala Banjo in Dhanukha district will be completed, bringing new irrigation facilities to 25,506 hectares of land. This project will irrigate 50 per cent of the land in Dhanukha and Saptari districts.

Khageri : This project which is already underway is the first step in irrigating the Rapti Valley, covering 6,070 hectares of land in Chitwan.

Tinau East Canal : The Tinau East Canal, built north-east of Bhairawa, is expected to bring about 5,263 hectares of land under irrigation.

Banganga : The Banganga canal of Taulihawa will irrigate 8,100 hectares of land in Kapilvastu district.

Mohana : About 8910 hectares of land in Dhangadhi district will be brought under irrigation by the completion of this project.

Bagmati : All the middle portion of Lands not covered by Kamala and Gandak projects will be irrigated by the Bagmati project. This covers 81,000 hectares of land on Rautahat, Bara and Sarlahi districts. The Construction of this projects will be started during the Third Plan period and completed during the Fourth Plan.

Gandak : This Projects, which is under construction by the Indian Government, is expected to irrigate 65,7000 hectares of land in Bara, Parsa and Rautahat district.

Chatra : The Chatara canal project is under construction as a part of the Kosi Project....The project will irrigate 60,750 hectares of land in Sunsari and Morang districts.

Other Projects : This covers the medium-size projects to be constructed in the Hill and Terai areas. As these areas are under survey, details of construction will be worked out after the surveys are completed. These projects will irrigate a total of 4,040 hectares of land.

Minor Projects : Projects not involving more than Rs 100,000 will be constructed in the Terai and Hill regions according to requirements.

Hydrological Survey: A hytirological survey will be conducted throughout the country.

Table 20. Summary of Irrigation Programme.

Projects	Land to be Irrigated
	(Hectares)
Kamala	25,506
Khageri	6,070
Tinau	5,263
Bangnaga	8,100
Mohana	8,910
Bagmati	—
Gandak	56,700
Chatra	60,750
Non-specific Projects	4,049
Minor Projects	2,023
Total	1,77,371

Pre-investment Survey

The Irrigation Projects depend on prior surveys. Such surveys are of two types : (1) Reconnaissance and (2) Pre-investment. The reconnaissance survey estimates the potential hydrological development. Reconnaissance surveys have been completed in most of the Terai areas during the Second Plan period. Similar surveys will be completed in the mid-western and hill regions by the end of the Third Plan period. Upon the completion of such surveys hydrological development works will be projected for the country.

Pre-investment surveys provide knowledge of the economic and technical potentialities of the development works. They include topography survey, geological research of dam sites, collection of hydrological data, and surveys of areas to be irrigated and their cropping patterns. A broad outline of proposed project is prepared on the basis of these results and development costs are estimated. Pre-investment surveys will be conducted in the Sunkosi, Kankai, Babai, and Rapti River basins during the Third Plan period.

Utilisation of Irrigation Facilities

Available irrigation facilities in Nepal are not being fully utilized. The growing demands of agricultural production call for maximum utilisation of existing irrigation facilities. Stress will be placed upon the repair and maintenance of the existing cannals to derive maximum benefits from them. Assistance will be given to the cultivators to achieve maximum utilization of water resources and will be imposed to check the misuse of water.

Irrigation facilities can provide benefits to the nation in two ways : first, they add to national production, and second irrigation fees directly increase national revenue. Compared with increases in agricultural production, irrigation fees are relatively minor ; they are a source of revenue which must be collected to ensure equitability in benefits from irrigation.

The main reason that revenue have been less than the anticipated is that there are no accurate records of land ownership. The cadastral survey is incomplete in most areas. The land records of Mal Addas cannot be used for revenue purposes because they are not prepared on a geographical basis. Dramatic increases in revenues derived from irrigated land can be expected after the land record system is reformed and maintained in a scientific way under the Land Reform Program.

The records prepared for tax purposes will be submitted to the district land office. It will be the responsibility of the district administration to maintain proper records and collect land and water taxes. Compared with other countries, Nepal water rate, which comes to about Rs. 1.61 per hectare is very low. It is not enough to meet annual maintenance cost. These considerations point to the necessity of an upward revision of irrigation fees.

CHAPTER XIII

Panchayat

The Panchayat system is not only a form of political organisation but also a most suitable and useful medium for the overall development of the country. His Majesty's Government has set itself the task of developing the nation by utilising effectively the available manpower and other resources under the Panchayat system. To succeed, self-reliance among the people must be promoted, and a sense of cooperation created among the village, district, and zonal panchayats and class organisations. Only then can a dynamic society be established which will mobilise the energies and the resources of the people of Nepal for development purposes in an orderly manner.

During the Second Plan period various development activities were undertaken at all levels : national, district, and village. However, it cannot be said that the panchayat organisations at each level were fully utilised. Attempts were made to involve people directly in local administration and to mobilise resources for local development activities. But the progress was not satisfactory. An effective decentralisation programme can not be achieved with just by passing laws regarding decentralisation. This must be carefully planned to make the programme a successful and the local government effective. The training and monetary assistance provided district and village panchayats by the central government helped them to perform their routine work more effectively. But such measures left unsolved the relationship between central departments and the district and village panchayats. However, the experience of the Three Year Plan period has been of considerable value in shaping future plans, particularly when considered in the light of the report submitted by the Decentralization Commission formed two years ago by His Majesty.

Objectives of the Third Plan

Based on past experience and present requirements, the Third Plan aims at the devdlopment of Panchayats at various levels for the national construction in accordance with the principle of decentralization.

However, no objective can generally be achieved simply by creating a system. Success of the system largely depends on the general population and their cooperation. The panchayat system and its decentralization programme cannot succeed simply by depending on the initiative and leadership of the elected panchas. It demands the cooperation of the general public. The rate of development of any country under any type of administrative system largely depends upon the public desire, enthusiasm, and interest. It is true that the appropriate system can easily encourage the awakened society to march ahead. Hence the foremost objective of the Third Plan in the process of panchayat development is to reorient traditional thinking pattern, and promote self-reliance, and create a sense of cooperation to achieve the goals of national development.

The development works to be performed through the panchayats during the Third Plan period will be as follows :

Decentralization

The Panchayat system established by His Majesty is not only a suitable political system but also an important medium of mobilising the resources and successfully implementing the plan. In accordance with the desire of His Majesty, each and every able citizen of the country must have an opportunity to participate in planning various development activities at all panchayat levels. The success of this system will largely depend on the implementation of the decentralization principle.

As long as the panchayats at various levels are not given the authority and responsibility to undertake their own development works, these panchayats will not serve effectively as a medium of economic development. Therefore, His Majesty's Government is committed to the task of decentralizing the powers to the panchayats for maximum benefit to the nation.

However, the real issues of decentralization can not be achieved simply by delegating authority to the panchayats. The steps must be taken up in an organized and planned manner. In addition to the autho-

-rity and responsibility given to the panchayats, financial resources must be made available to carry out the development activities. This also calls for training facilities and technical personnel to assist the organisations in their new efforts.

Implementation of decentralisation throughout the kingdom at one time is impossible. Moreover, it is not possible for the central government to pay attention to all levels of the panchayat system at one time. Therefore, an orderly process of decentralization is imperative. Details of the process are given in the Plan Implementation Chapter. It must be mentioned here that the decentralization programme will start first at the district level. The permanent phase of decentralization needs some pre-conditions created and this takes time to achieve. So the decentralization programme has been divided into three successive phases. After the completion of all three phases, all 75 district panchayats of the country will bear considerable administrative responsibility regarding land administration, agriculture, communications, education, health and other development activities.

Training

The success of the decentralisation programme depends largely upon trained personnel. Arrangements will be made to provide training facilities to the officials of district and village panchayats. Training will also be provided to selected panchas and village leaders to make them conscious of their duty and new responsibilities. But the most important task is to form a nucleus team and give them training regarding development programmes to be carried forward in the district.

Arrangements will be made to provide two types of training to meet the requirements mentioned above. The first type of training will be be given to the officials to be appointed at the district and village level to look after the education, health, postal and other services. A great number of officials will be required at village and district levels to make the Third Plan a success. Some of the officials who are already at work also need training to be more effective. As all the officials cannot be trained at one place 14 training centres will be established in the 14 zones within the next decade. During the Third Plan period, five such centres will be opened. Available resources, including instructors, do not permit establishment of all 14 training centres over the next five years.

During the Third Plan, these zonal training centres will train district and village panchayat officials in administration, cooperative organisation, education, health, agriculture, and other activities.

The second type of training by such zonal training centres will be provided village leaders and other people. Potential Leaders of class organizations, existing officials of village and district panchayats, and others, will receive training regarding the duties and responsibilities of every citizen in the development of the nation. Training facilities should be provided to the class organization workers to enable them to help the people to achieve the goals of decentralization. In total such training will be provided to 900 individuals from different zones.

In addition to the type of training mentioned above, arrangements will be made to hold training sessions from time to time in remote area of the country to help the people in their day to day activities. Such training sessions will be for both men and women and the period of training will vary from two weeks to two months.

Grants in Aid

One of the chief objectives of the decentralization programme is to mobilize local resources for local development work and to use the resources of the central government for purposes of national significance. Therefore, most of the local needs will be met by the resources of village and district panchayats after the completion of all three phases of the decentralization programme. Thereafter, the central government will provide only limited financial assistance to selective purposes. It will take time, however, to reach that stage. Grant assistance will continue in the early stages of decentralization for general administrative and local development costs. Financial help will also be provided to build panchayat buildings.

CHAPTER XIV

Industry

The rate of economic development of any nation is related to the expansion of industrial activities. Industry not only provides employment, but also increases productivity and national income by utilizing of available resources. Additional markets for agricultural products are also created. Thus industrial development and the expansion of agriculture are complement to one another.

Progress to Date

Nepal does not have a long history of industrial development. A few small industries were begun during World War II, but most of them did not survive because of technical and operational difficulties.

Much emphasis was given during the First and Second Plan to establish the preconditions for industrial development. Communications were expanded and transport and power facilities were improved. The Nepal Industrial Development Corporation (NIDC) was founded with a view to providing financial and technical assistance to the private sector. Financial support totalling Rs. 545,000 was extended by NIDC during the First Plan period, and Rs. 31,000,000 during the Second Plan.

Two industrial estates have been established and steps are being taken to establish a third. At Balaju Industrial Estate, 16 buildings have been constructed and six firms have begun production. At Patan Industrial Estate 20 buildings have been constructed and four firms have begun production. Construction of the Hetauda Industrial Estate has begun.

A number of other factories have been established during the First and Second Plan. Public sector industries—*e.g.* sugar, cigarette, leather and shoe constructed with the assistance of friendly nations have started production. Many units in the sugar, textile, biscuit, woolen textile, leather, straw board, carpet, pharmaceutic and re-rolling fields are being set up in the private sector. The capacity of existing plants producing rice, oil and other products have been increased and steps are being taken to increase the capacity of others, *e.g.* the tourist industry is being stimulated by new hotel construction.

Policies and Priorities Under the Third Plan

The industrial policy of encouraging and providing maximum facilities to private sector industries will be continued. Special consideration will be given to increase the productive capacity of existing plants under the industrial development programme. Emphasis will be given export promotion in order to earn foreign currency so that the capital goods needed for industrial growth can be purchased.

To ensure maximum utilization of limited resources, the order of priorities will be as follows:

First, preference will be given to such industries as lumber and plywood, paper, sugar, cement, lime and mica. Production of these goods will reduce imports and utilize raw materials available in the country.

Next, industries which will process materials imported in a semi-finished state will be encouraged. These industries will help to reduce the outlay required for imports.

Third, industries which will displace or reduce the import of products such as textiles, and mustard oil will be given preference where the production costs appear favourable.

Fourth, industries producing products for export—*e.g.* jute and tea—will be encouraged.

Fifth, basic industries such as fertilizer, agricultural implements, and tools, etc., will be given consideration, although greater emphasis will be given these in subsequent plans.

New Industrial Units

The Brick and Tile and Agricultural tool factories to be built in the public sector will start production during the Third Plan period. Cement, lime and mica factories are also to be established in the public sector. Other industry will be established either in the public sector or the private sector in accordance with the priorities fixed above.

During the Third Plan period, production targets for selected industries will be as follows :

Jute : The jute industry of Nepal, a major foreign currency earner, now has an annual production capacity of 13,000 metric tons. This capacity will be doubled during the Third Plan. A new jute mill will be constructed at Bhadrapur, once the Mechi Bridge is constructed as a part the East-West Highway.

Sugar : To meet the increasing demand of sugar, an additional 25,000 metric tons of sugar will be produced annually to give a total annual production of 40,000 metric tons.

Cement : A cement factory will be established at Hetauda with a production capacity of 60,000 metric tons.

Paper : A preliminary survey for a paper mill of 15,000 metric tons in the Jhapa district has been completed. Construction of the mill, largely with private capital, is expected during the Third Plan.

Distillery : One alcohol plant will be installed utilizing the by-product, mollasses, from the sugar mill at Birgunj.

Rice and Flour Mills : Mills with a total production capacity of 30,000 metric tons will be established at Hetauda and Kathmandu.

Plywood : Plywood factories with a total capacity of 15 million square feet per year will be established in Biratnagar, Hetauda and Dhangadi.

Solvent Extract : A solvent extract factory of 30,000 metric tons annual capacity will be established in Nepalgunj, utilizing the by-products of the mills.

Brewery : A brewery of 1,136,000 liter annual capacity will be constructed either in Nepalgunj, Hetauda or Kathmandu.

Soap : A few soap factories will be set up in Kathmandu and Hetauda. The target is to produce 23,000 metric tons of soap per year.

Cold Storage : A cold storage plant of 3,000 metric tons capacity will be installed during the Plan, probably in Kathmandu.

Paint and Varnish : A paint and varnish factory of 1,000 metric tons annual capacity will be established in Hetauda.

Cotton Textiles : During the Third Plan, two cotton textile factories with a capacity of 18 million metres, will be constructed to meet the domestic requirements for cotton cloth.

Woolen Textiles : The output of woolen textile mills is expected to reach 220,000 meters by the end of the Third Plan.

Industrial Surveys

Pre-investment surveys and the study of market potentials are necessary preconditions for industrial growth. During the Second Plan period, surveys were conducted by NIDC regarding the potential for producing products such as tea, plywood, paper, batteries, bone meal, ghee, canned food, carpets and similar items. During the Third Plan, NIDC and the Department of Industries will continue to press for the establishment of plants to produce these and other products. In addition, other departments—*e.g.* Mining, Agriculture, Botany—are exploring possibilities in their respective fields. During the Third Plan considerable effort will be made to complete pre-investment surveys and facilitate plant contructions and operation in connection with the following :

1. Sodas ash and chlorine
2. Alcohol
3. Paper
4. Starch and dextrose
5. Lime and cement
6. Glass and ceramics
7. Nitrogenous fertilizer
8. Iron and steel
9. Industrial development estates

Industrial Estates

Additional industrial estates will be established in selected areas to facilitate industrial expansion. After detailed study of the availability of power, transport and communication facilities, five new industrial estates will be installed during the Third Plan period in the following locations :

Town	*District*
Dharan	Sunsari
Pokhara	Kaski

Nepalgunj	Banke
Chandra Garhi	Jhapa
Krishna Nagar	Kapilvastu
or	
Rajbiraj	Saptari

These industrial estates will be autonomous bodies ; self-reliance and initiative will be encouraged.

Nepal Industrial Development Corporation

Since its inception in 1959, The Nepal Industrial Development Corporation has been fostering plan development. It has helped revitalize many antiquated industries and provided financial and technical assistance in establishing new industrial units. Moreover, it has encouraged industrial research and planning and provided managerial training to many Nepalese. In the Third Plan, however, these subsidiary activities will be conducted by an Industrial promotion and Productivity Center, to be set up as a subsidiary part of the Corporation.

Financial support provided to private industry by NIDC during the Second Plan period is shown in Table 22. During the Third Plan, the activities of NIDC will be expanded to provide maximum technical and financial assistance to private businessmen.

Table 22 (A).

Financial Support Provided to the Private Industries During the Second Plan, 1962-65

Type of Investment		1962-63	1963–64	1964-65	Total
			(*Thousands of Rupees*)		
Loan Investment	...	4,654	5,907	9,055	19,616
Capital Investment	...	100	874	350	1,324
TOTAL	...	4,754	6,781	9,405	20,940

Private businessmen have agreed to invest Rs. 20,500,000 in addition to Rs. 20,940,000 made by NIDC during the Second Plan period. In addition to the investment made to encourage private businessmen NIDC has also invested Rs. 5,124,320 in the Balaju and Hetauda industrial estates.

Organisational Changes and Training

Necessary steps will be taken to improve the organisation and operation of existing and newly created industries in the public sector so that maximum efficiency may be achieved. Feasibility and pre-investment studies will be conducted with considerable care in connection with proposals for new industries or the expansion of those now in existence.

Both the short and long term requirements of industrial growth must be recognised. Trained and experienced personnel are required in both public and private industry and these requirements will increase many-fold in the years ahead. Therefore, training facilities will be expanded substantially during the Third Plan. As already noted, the training program of NIDC will be given increased emphasis. Two training centres are being established in Kathmandu to train technicians skilled in operating and maintaining power and machine equipment. A training program will also be established in the Hetauda Industrial Estate.

CHAPTER XV

Cottage and Small Scale Industries

Cottage industries can play a strategic role in a predominantly agricultural country. A large section of the peasant population is occupied in farming for only a few months of the year. Cottage industry can provide the farmers with employment and income during the off-season. Articles of daily consumption can be produced with a small amount of capital. Hand woven textiles, straw baskets, canned food, brass containers and souvenirs for tourists are some of the items that can be produced on a cottage industry basis in Nepal. Competition from large scale machine methods of production is keen. But if care is used in establishing cottage industries where the market prospects are good and under circumstances in which both the capital outlay and the opportunity cost of labour are low, this method of production can be a profitable undertaking.

Progress in the Second Plan

During the Second Plan period, 1800 people received training in cottage industry methods and techniques. This training was provided by the Cottage Industries Training Centre in Kathmandu and by the various training centres established in the zones. Due to lack of capital and administrative and organizational difficulties, not all of the trainees found employment under circumstances which would permit them to utilize the skills acquired. As a consequence, it is clear that the Cottage Industry programme fell short of its goals.

Objectives in the Third Plan

Under the Third Plan, the objectives will be as follows :

1. To provide off season employment opportunities to cultivators through the establishment of cottage and small scale industries.

2. To meet by virtue of the goods produced by these methods, many local consumer needs, reduce import requirements and increase the income of the people.

3. To enhance, by these methods of production, the preservation and improvement of traditional arts and handicrafts in Nepal.

4. To develop those cottage and small scale industries which have foreign currency earning potential.

5. To organise cottage industries on a cooperative basis, thereby enabling craftsmen to pool their efforts in establishing their own productive units.

6. To develop new products and methods of production, and to develop markets for such products.

Programme in the Third Plan

To achieve the above objectives, the following programmes will be undertaken :

Training : Necessary changes will be made in the training programme to bring it into line with the requirements of the above objectives. For example, if improved methods of production are developed, the training programme will be altered accordingly. Training will be offered only in those fields in which employment can be found.

Extension : The extension programme will be made more effective and practical. Under this programme, arrangements will be made to provide training in new techniques of production and to provide necessary technical advice to craftsmen. Attention will be given to developing sources of raw material at reasonable prices. Exhibitions will be held to demonstrate new products and production techniques.

Marketing : Additional cottage industry emporiums and sales depots will be opened at the main trading centres and other important places in the country. Agents will be appointed in other places to coordinate sales in the absence of emporiums or sales depots. Such emporiums and sales depots will be made self supporting and be operated on commercial lines. Arrangements will also be made for government departments and agencies to purchase needed products from various craftsmen and small scale industries.

Research and Design Centre : Research activities will be stressed in order to develop improved implements and production techniques. New design will also be created and introduced to produce attractive articles.

Service Centres : Service centres will be established in different parts of the country to provide central technical services such as calendering and finishing operations for the textile industry.

Karkhana Jail and Orphan Welfare Centre : Existing programmes which provide technical training to prisoners and orphan children will be extended. These programmes help such individuals to become useful citizens of Nepal. Such programmes will be run by a Board instead of the Department itself.

Credit and Cooperative Organization : Production of handloom textiles, baskets, woolen goods, clay products, and other items can be organized on a cooperative basis and thus become eligible for credit from the Cooperative Bank. During the Third Plan, the Cooperative Bank intends to provide credit totalling Rs. 12,000,000 to 84 cottage and small scale industries. This will be of great assistance in the cooperative organization of craftsmen. Such societies will be autonomous bodies based on democratic and cooperative principles. Each society will be owned collectively by the members and managed by a managing committee elected by the members. In due course of time, there will be an organization at the national level which will have the responsibility of providing raw materials and facilitate the marketing products of the societies.

CHAPTER XVI

The Mineral Industry

Mineral resources may prove to be an important national resource for Nepal. But knowledge of the location, quality and quantity of these resources is limited. As a result, very little development has occurred.

Progress to Date

A geological survey of about 150 square kilometres of territory has been completed. In addition investigations have been made of the following:

1. Godavari marble mine
2. Copper mines of Kulekhani, Arkhouli and Pikhel
3. Cobalt mines of Samar-Bhamar, Netadarling and Nagre Bhada areas
4. Placer gold in Kali Gandaki basin
5. Coal and Gas of Kathmandu Valley
6. Iron ores of Phulchowki and Lobdi River
7. Oil deposits in Dailekh
8. Shale in the area of the Bandar River

In addition, pre-investment surveys have been conducted in the following places:

1. Mica deposits in Nuwakot and Ramechhap
2. Limestone deposits in Kathmandu and near Hetauda
3. Copper refining unit in Wapsa and Okhaldhunga. Technical assistance has been made available for the small workshops of that area.

4. **Thosey Iron Ore :** Construction of a laboratory and staff quarters has been completed. The laboratory is limited to the chemical, metallurgical and geological research branches. Research work and analysis of sample submitted by both public and private sector industries were conducted.

Third Plan

Priority has been given to the geological survey activities during the Third Plan period. Preliminary surveys will be conducted to explore the basic mineral resources available. The United Nations is providing technical experts to assist in this undertaking. Once the preliminary geological survey locates mineral deposits, an intensive survey will be undertaken in the second phase to determine quantity, quality and other basic information. Moreover, during the Plan period, attention will be given to the preparation of geological maps of those areas feasible for commercial exploitation.

In addition, preliminary as well as detailed survey work will be conducted for mineral oil and gases in Pyuthan, [illegible], Jhapa and Morang districts. Further study will be made of the feasibility of establishing an iron industry using the iron deposits of Phulchowki.

A detailed survey of copper deposits in Eastern Nepal will be completed during the Plan period. Initial steps will be undertaken to establish a copper processing plant near the richest deposits. Field surveys of placer gold in the basins of the Gandaki and Rapti rivers will be conducted. Work will also be undertaken to find other metals such as cobalt, nickel, lead, zinc. A study will be completed during the first year of the Third Plan to determine whether the production of zinc is feasible on a commercial basis in Eastern and Western Nepal.

Because of the increasing demand for construction materials in Nepal, detailed studies will be made of lime, limestone, china-clay, quartz and other deposits. Accordingly a survey of limestone at [illegible] and Kathmandu and of sand and quartz for glass production at Hetauda and Kathmandu will be conducted. The above efforts will be of great importance in establishing mineral industries in the fourth plan period.

Buildings for the Research Laboratory and [illegible] Research Centres will be completed and modern analytical equipment will be installed.

CHAPTER XVII

Tourism and Archaeology

Tourism

Tourism is an important source of national income and foreign exchange for many countries of the world. Tourism is increasing in popularity and the inflow of tourists into Nepal is rapidly rising. Adequate transport facilities and modern hotel arrangements are necessary conditions for the development of tourism. Inadequate air transport and hotel facilities in Nepal has become the bottleneck to its development. However, the efforts made during the Second Plan period helped greatly to overcome these difficulties. During the Third Plan, therefore, greater stress will be placed on increasing air transport and hotel facilities in order to derive the maximum benefits from tourism.

During the First Plan the Tourist Department was established and the Tourist Information Centre opened. As a result of the increasing number of hotels in Kathmandu, and such other facilities Tourists increased from 2,656 in 1958 to 3,954 in 1961 and 9,975 in 1964. The details are given in Table 23.

Table 23. Number of Tourists visiting Nepal 1958-1964.

Year	Number
1958	2,656
1959	[illegible]
1960	[illegible]
1961	3,954
1962	[illegible]
1963	[illegible]
1964	9,975
Total	[illegible]

At present, 270 hotel beds are available and additional 400 hotel beds will become available after the completion of two hotels now under construction in Kathmandu. Buildings at Kakani, Pokhara, Daman, Lumbini and Nagarkot have also been constructed for tourists.

Third Plan

It is estimated that by the last year of the Third Plan, 20,000 tourists will be visiting Nepal. By 1969-70 India expects to receive 200,000 tourists. It should be possible for Nepal to attract at least 10 per cent of them.

The construction of Gaucher Runway is expected to be completed in the first year of the Third Plan. This will enable larger planes to land. Hotel capacity will be doubled after the completion of hotels which are under construction at present. In addition, the construction of a new hotel with modern fitting and facilities is planned. Hotel of international standard will be constructed at Biratnagar and Pokhara. Other facilities will be developed to lengthen the average period of stay of the tourists. Internal transport facilities will also be expanded.

To provide facilities to visitors travelling over Tribhuvan Rajpath by car, the construction of an office building in Birganj is envisaged under this programme. The representatives of the concerned offices of HMG will be the staff of this office in order to help tourists with customs and immigration formalities before entering Nepal. A building will be constructed in Kathmandu to house the Department of Tourism and the central offices of the Royal Nepal Airlines Corporation.

To further publicise Nepal on an international scale films of Nepalese attractions will be made and distributed. Tourist literature will also be distributed.

Sight seeing in Nepal is not only limited but also expensive. The Department of Tourism will develop sight seeing facilities in Kathmandu.

Tourists are national guests and the responsibility of looking them in Nepal falls not only on the Department but also on all Government offices and other related agencies. All visitors coming in both an official and non-official capacity must be treated well to make them feel comfortable and at home. Attempts will be made to simplify legal and administrative procedures so that a minimum of inconvenience will occur.

Archaeology

The ancient history of Nepal is glorious. But research required to record this past is of recent origin. Recently the Archaeology Department was created to preserve objects of historical importance. The Department has conducted the excavation and study of about 60 historical places in the last three years. Many antiques have been discovered at six of these places—e.g. at Tilaurakot the remains of a civilization dating back to 600 B. C. has been found.

Excavations at Hadigaun and Lazimpat in the valley have been completed. The remnants of an 1400 year old civilization have been found at Hadigaun. Surveys of the Chovar cave in Kathmandu Valley and the Mahendra cave in Pokhara have been completed. Records of the numerous temples of the Valley have been collected. At present there are six museums under the Archaeology Department. The National Numismatic Museum is being constructed and will be under the Department when completed. Thirty-one books have been published in the Departmental publication series. Other Publications will report the research done by the Department.

Third Plan

Preservation of Temples : Several temples and other old artifacts are major tourist attraction in the Valley. These are not properly maintained at present ; extensive renovation and continued maintenance are urgently needed. Plans to preserve these historical objects, therefore, will be implemented in three Durbar Squares.

Preservation of Historical places : A plan has been worked out to preserve different places of historical importance, including Lumbini, Kapilvastu, the birth place of Lord Buddha. Necessary measures will be taken to preserve such places that are found to be of historical importance.

Mahendra Archaeological Museum : Arrangements will be made to collect and preserve the objects of artistic value in the museum which is under construction at present.

Archaeological Garden : The construction work of an archaeological garden in the area of Bhandarkhal in Lalitpur will be undertaken. Many objects of artistic and historical value will be placed in the garden for the attraction of tourists and other interested people.

National Archives Building : The construction of a national archives bulding will be completed during the first year of the Third Plan. The building will be well furnished and a system of keeping the records of all objects of historical importance in a scientific and modern method will be followed.

Lumbini : A master plan will be prepared for the future development of Lumbini garden. Necessary steps will be taken to receive financial assistance from different Buddhist Associations of friendly nations to construct and establish a library in Lumbini. The archaeological excavation and research work will be expanded during the Third Plan period. Results of such work will be published. Archaeologists will be encouraged to undertake research and excavation work of historical places.

CHAPTER XVIII

Foreign Trade

Foreign trade is of strategic importance in this age of increasing mutual relationship and cooperation among the various countries. It is especially important for the developing countries since they have to import new techniques, technical knowledge and many products from developed countries. From the long term point of view, trade can contribute greatly to the economic development of a country. External markets are large relative to its domestic market, and the cost of imports can be offset by expanding exports. Hence, it would not be wrong to say that trade development is an integral part of planning for economic development.

Growth of Foreign Trade

In the present Nepalese economy, international trade plays but a limited role. Available statistical data in the field of trade are not adequate. Nevertheless, the growth of trade in recent years has been sufficient to justify considerable optimism regarding future prospects. As tables in the appendix reveal, the volume of foreign trade has increased three times within five years : imports have risen 281 percent and exports 362 percent.

Characteristics of Trade

Eighty-five percent of Nepalese exports consist of food and raw materials. In 1961-62, food alone made up 65 percent of total exports. But the exports of finished goods have been expanding only 1.5 percent of total exports in 1957-58 consisted of finished goods, then had risen to 13 percent by 1961-62.

Seventy percent of total imports consists of food, cigarettes, finished products, gasoline, oil and other minor items. In the last few years, though the imports of finished consumption goods have increased, imports of food have decreased. Imports of goods related to industrial development have been increasing.

It is obvious from this short summary that Nepal, like many other developing countries, depends on the export of primary goods and the import of consumer goods and producer goods. Fluctuations in the prices of primary goods and increases in the imports of consumer and producer goods may have adverse effects upon the Nepalese development effort if corrective measures are not taken.

Most of Nepalese trade i.e. more than 90 percent is with India. Trade with China is still relatively small. Trade with overseas countries is very small, although it has been increasing during the last few years. Nepal exports jute and jute goods to overseas countries and imports construction materials, producer and consumer goods from these countries. Imports of capital goods will continue to increase, a part of which must come from hard currency areas. Therefore, to meet hard currency payments, exports to overseas countries must be increased.

Balance of International Trade

Table 24 shows that there has been a deficit every year in the balance of international trade. This deficit may be overstated because the statistical data are not complete. There is no record, for example, of some of the export of timber, leather, and jute on which custom duties are not levied. As discussed elsewhere foreign exchange holdings of the Nepal Rastra Bank, particularly of Indian currency, have been increasing. Although foreign aid and domestic monetary policy have also had an impact upon these holdings it seems reasonable to conclude that had there been continuous and severe trade deficits, these holdings would have been much less.

Table 24. Nepalese Imports, Exports and Trade Balances, 1957-62

Item	*1957-58*	*1958-59*	*1959-60*	*1960-61*	*1961-62*
	(Thousand Rupees)				
Imports	158,400	223,400	287,500	298,000	444,400
Exports	73,300	117,390	131,700	209,700	265,220
Surplus (+) or Deficits (−)	−85,100	−105,500	−155,700	−188,300	−179,200

Nevertheless it is necessary to stress that, on the basis of data available, the international trade balances have been unfavourable. Some improvement has become evident during the last few years, partly because prices of exportable goods have risen, but also because quantities exported have increased.

Foreign Trade in the Third Plan

Given the foregoing characteristics of Nepalese trade, the following policies will be stressed in the Third Plan :

Increase in Exports

Efforts will be made to increase exports by 100 per cent within the coming five years. It is obvious that since import of production goods from developed countries will be increasing, exports to overseas countries should be increased as much as possible. To achieve these objectives, production of exportable goods such as paddy, jute, oilseeds, etc., will be increased, and special attention given to those which can be exported to overseas countries. In addition, foreign exchange advantages will be provided to the exporters. At the same time, attempts will be made to improve the quality of export goods.

Change in the Volume of Imports

To reduce the foreign trade deficit, it is anticipated that the volume of imports must also be reduced, in addition to expanding exports. To achieve development goals, however, imports of capital goods must increase. Therefore, to reduce imports as a whole emphasis must be placed upon reducing consumer goods imports. As a compensating measure, domestic production of consumer goods must be stressed. During the Second Plan, this objective was fulfilled to some extent through the construction of the sugar, cigarette and shoe factories. The Private sector has also stepped up the production of consumer goods. Additional measures will be undertaken during the Third Plan, as noted in the chapter on industry.

Diversifying Trade with Developed Countries

In recent years, the volume of imports from China and the U.S.S.R. have been increasing. But this has been in the form of aid instead of trade. During the Third Plan, attempts will be made to further diversify trade by trade treaties with overseas and developed countries by other measures.

Increasing Auxiliary Services

In the country at present, there is still a lack of the necessary conditions for trade. Transportation, banking and insurance facilities are not adequate. Improvements in these fields must precede large increases in trade. In the Third Plan period,steps will be taken to overcome these shortcomings.

CHAPTER XIX

Power

Power is a basic requirement in the economic development of any country. In Nepal, the hydroelectric power potential is immense because of abundant water resources. However, development to date is not satisfactory and serious thought has to be given power development during the Third Plan period. Lack of adequate transport facilities, hydrological survey data and technicians cause many bottlenecks. Yet the efforts made are not discouraging. The total power at the beginning of the Second Plan was less than 10,000 kilowatts. The Second Plan set a target of generating an additional 30,000 kilowatts by implementing various projects to meet the growing demand for power. Thus installation of associated transmission lines and improvements in distribution systems was also included in the Plan.

It is now estimated that during the Second Plan power capacity was increased by only 7,500 kilowatts by the various projects which were implemented. The first phase of Trisuli Hydel Project could not be completed. Only one unit of the projects was installed during the Second Plan. This unit designed to provide an additional 3,000 kilowatts of power will not be in production until late 1965. Other projects completed, or nearly so, during the Second Plan are Panauti (2,400 kilowatts) and the Birgunj and Patan diesel plants (2000 kilowatts). In addition, considerable progress has been made in installing diesel plants in Biratnagar and Hetaure. Hydrological surveys have also been conducted on the Karnali, Kulekhani and other rivers.

Third Plan

To determine the demand of industrial concerns and households for power a plan has been framed dividing the country in three broad sections : Eastern, Central and Western. Projections regarding the future development ofindustries and population growth have been prepared for each and power requirements estimated. On the basis of this, a target of installing power capacity totalling 60,000 kilowatts has been set for the Second Plan.

Central Section

The present total available power supply in the Central section, comprising the areas of Khathmandu, Birgunj and Hetaura, is 12,000 kilowatts. It is estimated that at least 60,000 kilowatts will be needed by the end of this Plan period. The following power projects, after their completion, will produce additional power to meet the growing power demand :

Hetaura Project	5,000	kilowatts
Pokhara Project	500	"
Trisuli Project	18,000	"
Total	23,500	kilowatts

In addition, the Gandaki Project which is being constructed by the Government of India is expected to provide 10,000 kilowatts of power to Nepal by the end of the Third Plan. Even then, the combined output of all these projects will not be enough to meet the requirements noted above. The installation of another power plant is essential. A detailed survey for power plants on the Marsyandi, Kali and the Kulekhani rivers and for another plant on Trisuli rivers will be conducted in the first year of the Plan. Construction of the most beneficial projects will be undertaken inthe second year. The power plant selected for construction will presumably be large enough to provide the additional power needed during the Plan period. The new project will generate at least 16,000 kilowatt of power by the end of the Plan period.

The construction of 66 KV transmission line and substations Kathmandu, Hetaura and Birgung will be completed. Additional 11 KV and 33 KV transmission lines and substations will also be installed. Upon completion of these projects power distribution in Kathmandu Valley will be through 220 volt lines. Transmission losses which are now estimated to be 40 percent will be reduced to 10 per cent.

Surveys will also be conducted in the Bhairawa, Butwal, Bharatpur and Hetaura areas and a transmission system (or systems) designed accordingly.

Eastern Section

Installed power capacity today is 5,000 kilowatts. Compared with future requirments, this is a negligible amount. Generating capacity totalling

9,000 kilowatts will be made available during the Third Plan. This will include a 1,470 kilowatt diesel plant at Biratnagar and 7,500 kilowatt from the Kosi Project ; both of which are now under construction.

To provide still more power for the eastern sector, hydrological data will be collected for the Kankai and other rivers of the region and at least preliminary development plans prepared. It is anticipated, however that actual construction of these additional plants cannot be completed within the Plan period. Small diesel plants will be installed, therefore, to meet the power requirements of towns in Jhapa, Illam, and Saptari districts on a temporary basis through N I D C assistance. To link the Kosi generating plant with Biratnagar, a transmission line will also be constructed.

Western Section

Power facilities in the western section are almost non-existent at present. One diesel plant with a capacity of 500 kilowatt will be constructed in Nepalgung in the first year of the Plan period. Since there is little possibility of starting hydroelectric project in the near future, small diesel plants will be installed to meet the growing demands for power. The major effort in the West will be to complete the study of the Karnali river and to begin construction of the first phase.

Organizational Reforms

Measures will be taken to improve the administration of the Department of Electricity and the Electricity Corporation to coordinate the effects of the two organizations. Establishment of a central power Authority is under consideration. Its purpose would be to prepare a long term master plan for the production and distribution of power and to supervise the power generating units in the eastern section.

CHAPTER XX

Transport

Transportation has a strategic role to play to bring about efficiency and coordination in administration and to increase the volume of internal trade. Both are essential to the process of industrialization. Priority was given to transporation in the First and Second Plan, but the headway made so far is negligible in comparison to our needs. The mountainous terrain of Nepal makes construction of roads a difficult job ; the development of a railway system is quite impossible; and air transportation is very expensive. In this situation plans for the development of the transport system of Nepal must be prepared both from a short term and a long term point of view. With this objective in mind His Majesty's Government invited the International Bank for Reconstruction and Development to survey the existing transport system, make projections regarding future needs, and prepare a master plan for transport development. The following elements of the plan for transport are based upon the study.

Road Construction in the First and Second Plan

Before the launching of First Plan the total length of all roads in Nepal was 624 kilometres, including 368 km. of fairweather roads. The First Five Year Plan set a target of building 1440 more km, including 480 km. of metalled roads and 960 km. fair weather roads. In 1958, the Regional Transport Organisation (RTO) was established in a tripartite agreement between His Majesty's Government and the Governments of India and the United States to construct these roads. But technical and other difficulties made it impossible to achieve the targets as set in the Plan. In 1961, the RTO was dissolved.

High priority was also given to the development of transport during the Second Plan period. The target was to build 1440 km. of roads. including 320 km. of all-weather roads. By the end of the Plan period only 920 km. of roads were constructed. Of this total 849 were fair-weather roads ; 621 km. of the East-West Highway, 112 km. of the Kathmandu-Kodari Highway, 54 km. near Kailabas and Ghorahi, 29 km. in Dang and 13 km. in the Saptari-Kunouli and Ratna Ray Path. Only 72 km. of all-weather roads were constructed. Thus most of the roads constructed in Nepal so far are fair-weather jeepable roads. Only 454 km. of all-weather roads exist.

Road Construction in the Third Plan

During the Third Plan, 1604 km. of roads will be built including 720 km. of fair-weather roads. In addition existing roads will be renovated. Table 25 shows the roads to be constructed during the Third Plan period.

Table 25. Location and Length of Roads to be Built in the Third Plan.

Projects	*Fair-weather Roads*	*All-weather Roads*
	(kilometers)	
Adhawar-Janakpur	—	117
Janakpur-Jhapa	—	264
Kathmandu-Kodari	—	104
Sunauli-Pokhara	—	209
Narayan Gadh-Butwal	122	—
Trisuli-Pokhara	176	—
Mahendranagar-Doti	240	—
Other	182	190
TOTAL	720	884

Details of road construction under the Third Plan are given below.

East-West Highway

The construction of 381 km. of roads stretching from Mechi in the east to Adhawar in the west will be completed during the Plan period. This will link all important towns, production centres and markets of the eastern

Terai with Kathmandu, since the Raxaul-Kathmandu roadway joins the East-West Highway. The existing protion of the East-West Highway, stretching from Hetaura to Narayan Gadh, will be improved. From Narayan Gadh west to Butwal the road will be extended on a fairweather basis. Survey, design and cost estimates will be completed for the remaining portion running 432 km. west from Butwal to Banbass. Thus, by the end of the Third Plan period, nearly 50 per cent of the 1040 km. EastWest Highway will be completed.

Raxaul-Kathmandu-Kodari Road

The Kathmandu-Kodari road upon its completion during the Third Plan will link the capital city of Kathmandu with Kodari, a town on the Chinese border. Kathmadu is already linked with Raxaul on the Indian border including Raxaul to Amlekgang 39 km. and Hetuada to Bhainse 19 km. Further improvements will be made of 5.8 km during the Third Plan, particularly in the Raxaul-Bhainse sector. By the end of the period, an all-weather road will connect Kathmandu with the Indian border (and railhead) to the south and the Chinese border to the north.

Sunauli-Pokhara

A traditional trade route for foot-traffic exists in west-central Nepal, connecting the towns of Bhairawa in the south (near an Indian railhead) with Butwal, Tansen, Pokhara and other trade areas in the hills. The Pokhara-Sunauli road, now under construction, will connect these points so that modern transport can be used. This road, 205 km. long, will be completed during the Third Plan.

Kathmandu-Pokhara

A road now exists connecting Kathmandu with Trisuli, 69 km. to the northwest. This road will be made an all-weather road during the Third Plan. It will also be extended, on a fair-weather basis, west to Pokhara, thus connecting two major hill communities directly by a road through the hills.

Mohendranagar-Doti

To relieve the isolation of several far-western districts, a fair-weather track will be constructed between Mahendranagar and Doti. Total length will be approximately 240 km. and will be completed during the Third Plan period.

Construction and Improvement of Local Bridges and Roads

Construction of new roads will not be of lasting significance unless a proper system of repair and maintenance is established. Therefore, during the Third Plan emphasis will be given to maintenance and further improvement of roads and bridges, both new and existing, so that the roads system as a whole will be maintained for heavy use.

Construction of Suspension Bridges

Several rivers of Nepal flowing from north to south either have no bridges at important crossing or have bridges usable only in the dry season. Because much foot-traffic must cross these rivers, suspension bridges are needed at many points. Therefore, 15 bridges will be constructed during the Third Plan.

Aid to Panchayat for the Construction of Local Roads

The Roads Department will provide financial and technical assistance to different village and district panchayats to help them build local roads. For the most part, these roads will be constructed by local resources, but governmental aid will be of great importance in providing proper technical guidance and in supplying construction items not available locally.

Miscellaneous

During this Plan period, a material laboratory will be established to study and test construction materials. The laboratory will also make the results of its research available to concerned departments. Several buildings for divisional offices of the Road Department will be constructed in different parts of the country. This will enable them to supervise the construction of new roads and the repairs and maintenance of roads in the several divisions more efficiently. His Majesty's Government has created a new division under the Roads Department to work out future plans and to conduct surveys for road construction in various parts of Nepal. Such activities will be expanded during the Plan period.

Provision for Vehicles

Mere construction of roads is not enough in Nepal. Proper utilization of roads is also required. As the Government has to concentrate its efforts on construction, the policy is for automobile and most of the truck and bus services to be provided by private individuals and companies. Investments, particularly in trucks and buses, will be encouraged through existing financial institutions.

Air Transport

It will take considerable time and resources to develop roads in Nepal. Air transport therefore, will remain important as a means of providing access to the hill areas of Nepal.

Progress to Date

Before the launching of the First Five Year Plan, air services were available only in five places : Kathmandu, Pokhara, Bhairawa, Simra and Biratnagar. These airports were all fair-weather strips except in Kathmandu.

During the First Plan period, the following fair-weather airfields were constructed to provide additional services :

Bharatpur
Dhangadhi
Nepalgunj
Dang
Rajbira.
Janakpur
Palungtar

Upon completion of the First Plan, Nepal could provide air facilities in 12 places in the country. In addition, the Royal Nepal Airlines Corporation was established to provide regular air services. Improvements on the Kathmandu; Biratnagar, and Bhairawa air fields were made.

Considerable headway was made in the construction of airports during the Second Plan : short-take-off-and-landing (STOL) airstrips were completed in Baglung, Jumla, and Jiri, and a 1,524 meter fair-weather airfield in Jhapa District. Steps were taken to improve facilities at Bhairawa and Biratnagar and bring them up to all-weather standards. A 3,300 ft. cross-runway in Kathmandu was planned and construction began in Kathmandu.

Program under the Third Plan

The result of the survey team of the International Bank for Reconstruction and Development, submitted in September, 1964, classified air facilities in Nepal into three groups :

A. *Permanent Airfields*

Kathmandu
Bhairawa
Nepalgunj
Tumlingetar
Biratnagar
Janakpur
Pokhara
Silgadi-Doti

B. *Temporary Airfields*

Bhadrapur	Bharatpur
Gorkha	Rajbiraj

C. *Airfields to be Constructed for Interim Period*

Dang Dhangadi or Mahendranagar
Simra (To be decided after the survey)

Measures will be taken to develop these 15 airfields of which 8 are all-weather, 4 fair-weather, and 3 interim field.

During the Third Plan period, the airfields at Biratnagar, Nepalgunj and Tumlingtar will be made all-weather fields and brought up to the standard required of the permanent classification above. By the end of the Plan, six out of the eight permanent airfields will be of all-weather standard. Of the remaining two airports, surveys and construction work will be completed at Doti airfield. As the present Pokhara airfield is not properly located for use by large planes, plans will be developed to construct a new strip about 4 miles east of the present one.. Construction of the Gaucher cross runway will be completed by the end of the first year of the Plan.

Since Gaucher Airport is the most important airfield in Nepal, attempt must be made to make it a modern one. A master plan for development and modernization, will be prepared by consulting firm and work begun to turn the present Gaucher Airport into a modern international airport. A new terminal building, two hangers, a car parking lot and a new road leading to the airport are all under construction and will be completed early in the Third Plan.

At other airports, Bharatpur, Dang, Gorkha and Dhangadhi, terminal buildings, staff quarters and other facilities will be constructed to bring the entire air transport system of Nepal up to as high a standard as resources and experience will permit.

Construction of 20 small air strips will be undertaken in the hilly regions of Nepal where large planes cannot land. The Panchayat Department will provide assistance to local panchayats in constructing such strips. In the first year of the Plan, steps will be taken to locate suitable places and aquire land. Four strips will be constructed in the second year and another 16 by the end of the Plan period. This will provide needed transport facilities in the hill areas and make it possible to step up the rate of development considerably.

The Civil Aviation Department will be strengthened and improved. Its responsibilities include the construction and maintenance of all the airfields in the country and the operation of the air communication system.

The Royal Nepal Airlines Corporation (RNAC) will be provided both technical and financial assistance to strengthen the organization and to make air services more effective and efficient. Depending upon the traffic and financial support available, form one to three new faster planes will be purchased for external flights. Present Dakota planes will continue to be used for internal flights. Repair and maintenance facilities will be expanded and improved.

Training for RNAC staff will be conducted in Nepal and both flight and service personnel will be sent abroad for advanced training. A new central office will be constructed for the airline. Twelve staffs quarter and storage facilities for fuel, spare parts, and equipment will be located at various airports. New buses for passengers will be provided in Calcutta. Patna, New Delhi, Simra, Biratnagar. Bhairawa, and Kathmandu.

Railway Transport

In India railways occupy a prominent place in transportation services. In Nepal, however, it is very difficult to construct railways: Only two lines exist at present. One runs from Raxaul to Amlekhgunj, a distance of 29 miles. The other links Jayanagar to Janakpur. Both link points in Nepal to Indian railheads. Although the Raxaul-Amlekhgunj line was of considerable importance when first constructed in 1927, traffic on the Raxaul-Kathmandu road opened in 1956 has reduced its significance in the transport system.

Programme in the Third Plan

Construction of Railway Terminal in Birgunj : Goods coming from the Indian metre-gauge railway terminal at Raxaul are unloaded before being shifted to the Raxaul-Amlekhgunj railway or to trucks for transport to various points in Nepal. The Nepalese customs check-point is at Birgunj just across the border from Raxaul. Much confusion, revenue loss and damage to goods now occur because of the repeated loading and unloading that now must take place on both sides of the border.

In the light of such difficulties a metre-gauge rail terminal will be constructed during the Third Plan so that railway car in Birgunj can be loaded and unloaded easily. Custom facilities will also be constructed near the present Nepalese railway station.

N. J. J. R. : As there is no programme to construct roads from Jayanagar to Janakpur at present, the railroad connecting these points is expected to continue to carry considerable freight and passengers. Plans will be developed to improve existing facilities and possibly to extend the line to Chisapani.

Ropeway : In view of the hilly topography of the country and the relative cheapness of ropeway transportation, the ropeways, can become an important means of transport. The economic benefits of ropeways had been demonstrated by the Kathmandu-Hetauda Ropeway. However, in the absence of detailed surveys it is not possible to determine the economically beneficial sites for the ropeways. Therefore, in this plan, programmes have been made for surveys. Once the sites are determined, construction can be undertaken later.

National Transport Organization

Recently a National transport organisation has been established to maximise the utilization of the transport resources of the country. The principle objective of the Organisation is to effectively coordinate the ropeway, railway and other means of transportation in the Bagmati and Narayani zones. Moreover, the Organization will provide facilities and guidance to different transport organization in the private sector.

CHAPTER XXI

Communications

Transporation and communication facilities are inadequate in Nepal. The importance of these vital factors in the time of national awakening cannot be overstressed. As governmental and commercial decentralization increases throughout the country, there must be effective communication links between the center and the districts. This is essential not only for the smooth running of administration and proper guidance to the district by the center, but also for public and private business communications as well.

Postal Services

The first postal services was begun in 1875. About 100 post offices were then established. The main objective was internal administration and national security. Just prior to the First Plan the number of post offices had risen to only 124. During the First Plan Nepal acquired membership in the International Postal Union.

In the Three Year Plan period, emphasis was laid on consolidation of the existing postal system. The General Post Office in the center was expanded and seven Zonal Post Offices were established to supervise and control the postal services between zones. Now there are 4 City Post Offices, 9 Central Post Offices, and 153 Branch Post Offices in the country. In addition, there is one Post Office which is now responsible for foreign postal services. There are three mail routes : (1) Western Hill Route ; (2) Eastern Hill Route ; and (3) Eastern Terai Route. These routes are connected to branch lines. Internal letter insurance and internal parcel insurance services have been recently started.

In order to utilize the facilities available under the International Postal Union, Nepal has reached agreements with India and China and is negotiating with Pakistan, the United States and the United Kingdom.

Third Plan

The number of post offices is insufficient for present needs. Therefore, the post offices will be increased and existing offices expanded and improved. The organization of the postal system will be modified and other steps taken to improve efficiency and service. Highlights of the program are as follows :

Organisation : An effective administrative system is the precondition for an expansion of postal services. To achieve a greater degree of specialization, the total postal system will be subdivided into administrative postal services categories. Seven more Supervisory Post Offices at zonal level will be established. At the district level 28 Superintending Offices will be established which will work as a link between the Zonal Supervisory Office and the operating post offices.

Branch Post Offices : According to the Postal Survey Reports prepared during the Second Plan, there should be one Post Office to cover an area of 110 square miles. Therefore, 130 more post offices will be required. Of these, 85 will be established in the Third Plan period. In deciding upon the location of these new post offices, area and population to be served and existing postal facilities will be taken into account.

Cooperative Post Offices : The first Cooperative post offices was established in 1957 and increased to 150 by 1961. These were started as an experiment to meet the need for postal services and to develop a sense of cooperation as well. Although many of them were closed due to lack of cooperation and inadequate inspection and guidance from the Department, the results justify further expansion. The target for the Third Plan will be to establish 400 more Cooperative Post Offices. These will be run by village panchayats with the assistance of the Postal Department.

Extension of Postal Routes : In order to make postal serives effective, a survey to determine the location of 20 new postal routes will be carried out. Existing routes will also be studied and necessary changes will be made.

Surface and Air Mail : In order to utilize new highway facilities, mail vans will be put into use as rapidly as the highway network is expanded—e.g. mail vans will soon ply the Kathmandu-Kodari road and portions of the East-West Highway. Air mail services will be extended to remote areas of Nepal as soon as regular plane service is extended.

Inspections of Mail Services : The people are the ultimate sufferers from theft and careless handling of mail. Faith in the reliability of the postal services diminishes. To do away with these shortcomings, postal inspectors will be trained and a postal inspection service established. These inspectors will be posted at first in Kathmandu and the number will then be increased to cover different parts of the country.

Money Orders : Money order service is only possible if inspection of mail is effective. The operation of a money order services will thus be undertaken in the second year of the Plan, after the mail inspection program has been implemented.

Philatelic Scheme : This scheme will be made more effective in order to get maximum advantage for the sale of postage stamps. A veriety of postage stamps in attractive design will be printed so as to increase income.

Telecommunication

Use of telephone and wireless services was limited to a few districts of Nepal at the beginning of the first Plan. Some 300 lines were operating in Kathmandu. During the First Plan, a modern automatic system with a capacity of 3,000 lines was installed in Kathmandu: There were all in use within a short period.

Shortly after World War II; wireless sets were installed in 28 districts. These were replaced by new sets in 35 district beginning in the latter part of the First Plan.

Three Year Plan Progress

In the field of wireless installation, seven zonal area control stations were established, and 50 wireless centers under these control stations were also installed. An international telecommunication system was completed with two circuits linking from Kathmandu, Delhi and Calcutta. With the establishment of two teleprinter centers, prompt communication of news from foreign countries has become possible.

The existing 1,000 telephone lines at Kathmandu have proved insufficient, and steps have been taken to add some 4,000 more lines. Installation of a 300 line system with a local exchange at Biratnagar has been completed and will start functioning during the first year of the Third Plan period. The Nepal-Pak telecommunication project is nearing completion and will start functioning at the beginning of the Third Plan.

The Program in the Third Plan

The following telecommunication projects will be carried out during the Third Plan :

Completion of Present Schemes : Installation of an additional 4,000 lines in Kathmandu, plus a 600 line exchange at Patan will be finished. Installation of an additional 300 lines in the Singha Durbar Secretariat will also be completed. Installation of the 300 line system at Biratnagar will be finished during the first year.

East-West Micro Wave : The present telephone system within Nepal extends eastward from Kathmandu through Dhankura, Jaleshwor and Janakpur to Biratnagar and westward to Palpa. This line is old and not properly functioning. Hence, this will be replaced by micro-wave system. This system will be capable of carrying messages continuously through hundreds of channels and will not be affected by the monsoon. Fifty per cent of the total project will be completed during the Third Plan and the remainder will be carried over to the next plan.

Trunk Call Service : The following services will be established under this scheme :

1. The telephone service between the towns in India and Kathmandu will be operated through an 8-channel carrier system. There will be a direct contact between Kathmandu and Patan through one of these channels. The other channels will be used to maintain contact with other towns.

2. There will be five circuits between Kathmandu and Birgunj. A direct link from Kathmandu to Hetaura, and Hetaura to Birgunj will be established as a separate circuit. Under this system, direct contact between Hetaura and Bhainse, Hetaura and Amlekhgunj, and Birgunj and Simra will be possible. Of these five circuits, one circuit will be specifically used to contact Palung and the Palung-Hetaura vicinity from Kathmandu.

Telegraph System : A Six-channel V.T.T. telegraph system will be established to communicate masses from Kathmandu to India and various other centres. A three-circuit telegraph line from Kathmandu will be extended to Birgunj through Bhainse, Hetaura, Amelekhgunj, and Simra.

Six English script teleprinter sets will be installed at Kathmandu for receiving news from India. Further, there will be four teleprinter sets for news service between Kathmandu and Birgunj. These English script teleprinter sets will be replaced by Nepali script teleprinters in the future.

Telephone Exchange : In Birgunj, a 300 line automatic exchange and a trunk exchange services will be established. There will be four direct lines, and two booking and inquiry lines. For the trunk call service between Kathmandu and other districts of the country, a trunk exchange service having four direct lines, two enquiry and booking lines will be established. The international trunk exchange will also be started at Kathmandu. Public call centres with ten magnetoboard systems will be established in Palung, Bhainse, Hetaura, Amlekhgunj, and Simra.

CHAPTER XXII

Education

Education plays an important role in the field of social and economic development. Technical and administrative knowledge required for the creation of a modern society is obtained from an education that is in keeping with the need of the times. In addition, education is vital for the promotion of the intellectual and physical personality of the people. An educated peasant, aware of the needs of reform in agriculture, will be enthusiastic to adopt modern methods of cultivation.

Significant progress has been achieved in education over the last few years. However, Nepal still lags far behind in this field in comparison with other countries of the world. It is imperative, therefore, to step up the efforts in educational development in the coming years. But such efforts should be preceded by a careful consideration of several factors, particularly the shortage of financial resources and technical know-how. In order to attain maximum benefit from the scarce resources, a well-coordinated and comprehensive education programme should be formulated. Development of education calls for an adequate supply of trained teachers as well as education materials, which will take a long time to be fulfilled. The number of primary schools can be increased only in proportion to the teachers trained in the normal schools. Since primary and secondary education programmes have to be developed in a coordinated way, the expansion of primary education will determine the provision to be made for secondary education.

Following the Karachi Plan of 1962-63, His Majesty's Government has adopted the policy of providing primary school facilities to all boys and girls by 1980. Development of secondary and higher education should be carefully considered, bearing in mind the expansion of primary education and the growing need for educated manpower. The objectives for education in The Third Plan period are as follows.

1. To provide primary education to 40 per cent of the boys and girls from six to eleven years of age and to expand the teachers' training programme in the same proportion.

2. To develop secondary and vocational education in accordance with the need for skilled and semi-skilled personnel.

3. To raise the standard of teaching in secondary and higher educational institutions.

4. To supply books and other education materials as required by the educational institutions.

5. To make necessary improvements in the work of the Education Ministry concerning statistics and programming in order to create a sound base for the formulation of education development programmes in the future.

Education Development Programme

Based on the above policy guidelines and objectives the following programme for education at different levels has been proposed in this plan period.

Primary Education

Progress made during the last few years in primary education is encouraging. By the end of the second Plan, 27 per cent of the children of school going age received some primary education, compared to 0.7 per cent in 1949-50 and 15.3 per cent in 1961-62. There is still much to be done to set up a sound system and to raise the standard of education. At present for example, the number of fifth year students is less than 10 per cent of the first year students. It is due partly to the fact that there are 300 one-teacher schools where students cannot pursue their studies further than the 1st and 2nd classes. Hence over half of the primary school students do not go beyond the first class. Education of this kind is costly and of limited benefit hence a misuse of the country's scarce resources.

It is therefore necessary that the number of classes be increased in existing schools so that students do not encounter a dead end. Primary schools must also be extended to more areas. The target under the Third Plan will be to provide primary education to 40 per cent of the children of school age. In order to fulfil the demand for teachers in the primary schools, 5,000 teachers will be trained with the extension of the teach training programme. In addition, further training will be given to teachers now serving in 3,000 primary schools. Increased assistance will be extended to schools for the construction of new buildings to increase the number of classes. In this programme, priority will be given to those schools that provide free and compulsory education.

In order to make text-books available for the primary schools, sixteen books will be published and distributed. Management of schools will be decentralized in those districts where it is found appropriate. Grants given by His Majesty's Government to the primary schools will be gradually reduced so as to make the schools locally self-sufficient.

Secondary Education

The programme in secondary education exceeded the targets set for it in the Second Plan, but it is not keeping pace with the programme in primary education. Special effort will be made in this plan to coordinate the programmes in the two fields. In addition, improvement in the quality of secondary education is necessary. For example, the percentage of students passing the examination given at the end of secondary training and receiving their School Leaving Certificate (S. L. C.) is very low. Attention will be given to this point during this Plan period.

During the Third Plan, the enrolment of secondary school students will be increased from 40,000 to 68,000 by upgrading 115 primary schools into middle schools and 36 middle schools into high schools. Under this programme 1,000 secondary school teachers will be trained. Provision for the required education materials will also be made. Hostel facilities will be provided to the students coming from distant places. Special studies will be undertaken in different high schools to evaluate the effects of the various steps taken under the education development programme, and seminars of supervisors and teachers will be organized.

Vocational Education

The aim of the vocational education program is to combine occupational and general knowledge. To achieve this objective, high schools have been converted into multi-purpose schools to provide, in addition to the basic curriculum, vocational training in agriculture, industries etc. During the

Second Plan period, 16 agriculture secondary schools were converted into multi-purpose schools and training has been given in four subjects : agriculture, home science, commerce and secretarial skills. In addition, construction of a technical institute and a demonstration multi-purpose high school with capacities of 600 and 500 students respectively was begun. Every year 100 vocational teachers are given 8 weeks' in-service training.

During the Third Plan period, teaching in the technical institute and the demonstration multi-purpose school will be started. By 1970-71 it is proposed to open both of these educational institutions at full capacity. A hostel accommodating 250 students for the technical institute and another for 100 students at the demonstration school will be constructed.

In the present 16 multi-purpose schools, the number of vocational classes will be increased from 120 to 320, and thus 5,000 students will receive multi-purpose education. Ten more high schools will be converted into multi-purpose schools to provide vocational training for another 2,500 students. At the zonal level, three vocational school buildings and hostels will be constructed. More than 60 workshops will be arranged over the country and guidance and supervision will be given the multi-purpose and vocational schools.

Adult Education

Under the adult education programme initiated in 1956-57 it is estimated that about 100,000 adults were made literate by 1965-66. During this Plan period, an additional 100,000 adults will be made literate. Moreover, a regular evaluation of this adult euducation programme will be made and contact maintained with the trained adults in order to keep the students in touch with what they have learned.

Education Materials

Significant progress has been made in the production and distribution of education matarials as a result of steps taken in accordance with the recommendation made by the National Education Planning Commission in 1954-55. It is evident however that education materials required in the future will be grown rapidly as the number of students increases and the quality of education improves. Therefore, the programme for the production of education materials will be expanded according to need : 75 new books will be prepared and published—some for use by students as texts and others by teachers as reference. In addition to the three quarterly magazines now being published, two other quarterlies will be started. Records, charts, pictures, and other teaching materials in Nepali and English will be made available in increased quantities. A Nepalese dictionary of scientific and technical terms will be prepared with the help of the Royal Nepal Academy.

Higher Education

There has been rapid growth of higher education since 1954-55, but little improvement has been made in the organization and management of colleges. At present there are 29 Arts and Science Colleges in 11 of the 14 zones. Fourteen of these colleges are centered in the Bagmati zone alone. In 18 colleges, however, number of students is less than 100. Only five colleges have more then 300 students. The curriculum is very weak in many instances. It is evident from these facts that a special effort should be made to raise the standard of higher education, and that improvement in the organization of the colleges and in the curriculum must receive first attention.

In this Plan the higher education programme has been divided into four parts : (1) College improvement, (2) Secondary school teacher training, (3) Primary school teacher training, and (4) Tribhuwan University.

College Improvement Programme

Under this programme, honours classes will be organized in some subjects at Tri-Chandra College and necessary facilities will be made available for this purpose. The library of the Tri-Chandra College will be expanded. An examination hall will also be constructed. In addition, other colleges will be given assistance for building construction.

Secondary School Teachers' Training

At present about 2,200 teachers are teaching in the secondary schools, of which adequately trained teachers number only 100. This is mainly because only a few of the persons trained in the College of Education work as teachers after graduation. It is, therefore, necessary to make provision for the employment of the trained persons as teachers along with an increase in the capacity of the teacher-training institutions. In this Plan period, new teacher training colleges will be set up by providing one year and two year B. Ed. course. In addition, a Master of Education degree programme will be initiated at Tribhuwan University. Night classes will be held for teachers already on the job. Great stress will be laid on teaching methods in workshops to be conducted twice every year. Necessary steps will be taken to make the teaching profession attractive for the trained persons.

Primary School Teacher Training

The main objective of the primary school teachers training programme is to train teachers for the primary schools, and to bring about a uniformity in the teaching methods and curriculum of the primary schools. Under this programme 4,500 teachers have been trained since 1954-55 in seven normal schools now functioning in Kathmandu, Birgung, Dharan, Illam, Pokhara, Palpa, and Salyan. During the Third Plan period, a new normal school will be established at Dandeldhura and hostels will be built at Birgunj, Dharan, Illam and Palpa. During the vacation period normal school workshops will be organized where the curriculum will be reviewed and revised as necessary.

Tribhuwan University

Under the building construction programme as envisaged in the Second Plan, a chemistry department building, a student hostel, staff quarters and a memorial hall have been completed. The College of Education buildings and a library are under construction. Another objective in the Second Plan was to increase the number of Nepalese lecturers in the University. Satisfactory progress has been made in this field as well.

During the current Plan period, expansion will be made in the facilities of the Arts, Science, and Commerce colleges. In particular, special effort will be made to initiate higher studies in Chemistry, Biology, Botany, and Physics. As mentioned above, Master of Education classes will also be started. Construction of buildings for the Physics Department and two hostels will be completed soon in order to open classes for the M. S. degree in Chemistry, Physics, Biology and Botany. By the end of the Plan period, construction of an Arts College building, staff quarters and office buildings will be completed. In addition necessary provision will be made for a gymnasium, a playground, water, electricity and roads on the campus. A master plan for the development of Kirtipur Campus will also be prepared. The present educational system and the curriculum will be reviewed and necessary revisions will be made.

CHAPTER XXIII

Health

As in other fields, Nepal lags far behind in health services. A number of development projects have been undertaken during the First and Second Plan periods, but a well-organized health service is still lacking. A large number of people still fall victim to cholera, small-pox, tuberculosis, and malaria. As a result, the average life expectancy of a Nepalese is 32 years, whereas in India, Pakistan and Japan it is 45,45 and 70 respectively. The annual death rate in Nepal is 21 per thousand and infant mortality is 244 per thousand. In order to increase the average life exectancy of the people, improve their health and enlist their active participation in development, malaria must be eradicated from the area where 4,500,000 people live and covering 40160·0 kilometers. The country must be freed from the menace of tuberculosis, small-pox, leprosy and other diseases.

Programme in the Previous Plans

During the First Plan period, hospitals with capacity totalling 149 beds were constructed and 79 health centres established. In the Second Plan three more hospitals and 8 health centres were added, bringing the total number of hospital beds to 1,157. Malaria eradication work has been completed in the Central Zone and it is under way in the Eastern Zone. In Kathmandu 450,000 people have been inoculated against small-pox and a survey of leprosy has been completed.

Third Plan

Under the present circumstances, it will inevitably take sometime to develop a satisfactory programme in the health services of the country. Financial resources are not the only hurdle to overcome. Lack of administrative and technical personnel is an equally important limitation in this field. In order to make any headway, the number of doctors, nurses and other personnel has to be increased. But training of these personnel takes time. Hence the limited financial and technical resources of the country have to be used in the best possible way. Keeping in view the short as well as the long-term need for health services, the health services programme of this Plan is divided into three parts : (1) preventive measures, (2) hospital services, and (3) training.

Preventive Measures

Great emphasis is given to preventive measures. The programme for the Third Plan will be as follows :

Malaria Eradication : In the central zone, D. D. T. spraying work has been in progress since 1960, and the survey work will be continued. In fiscal 1965-66, survey work will be completed ; in 1966-67, under the consolidation phase, malarial insects will be widely investigated. If all goes well, in the final year of the Third Plan, the maintenance phase will be started in the central zone.

In the eastern zone D. D. T. spraying work will be continued up to the fourth year of the Third Plan and the consolidation phase will be initiated in the final year.

In the western zone, D. D. T. will be sprayed from the first year of the Plan and survey work will be started in selected areas beginning in the third year. In some areas consolidation phase will be entered in the final year. The Consolidation phase in this zone will not be completed, however, until the middle of the fourth plan.

Eradication of Small-Pox : Small-pox eradication work on a pilot project basis was initiated in the country in 1962-63 with the help of the World Health Organization (W. H. O.). Within the Third Plan period, the inhabitants of Kathmandu and other districts will be inoculated against small-pox.

Eradication of Tuberculosis : A tuberculosis eradication pilot project was initiated recently with the help of W. H. O. and UNICEF. Under this programme the procedure is to find and treat tuberculosis cases. This programme will be undertaken in Kathmandu for the first three years of the Plan. In the last two years it will be extended to Morang and Parsa districts.

Leprosy Control and Survey : This pilot project was started in Kathmandu in 1962-63 in order to identify the victims of leprosy, to treat them, and to set up leprosy control centres. At present, this work is carried out at Pachali Clinic, Khokana Leprosarium and four other clinics. Two additional clinics and an ambulatory unit will be established. A leprosarium will also be constructed.

Skin and Venereal Disease Control : As the present Pachali Clinic for skin and venereal diseases is not up-to-date, a new building will be constructed, and, in Bir Hospital, a dermatological ward of 10 beds will be opened to treat persons suffering from these diseases.

Hospital Services

During the Third Plan, 12 health centres will be upgraded, and converted to hospitals adding 475 hospital beds. In addition, 32 health centres will be provided with modern facilities and equipment, and 103 health posts will be established. Furthermore, 8 zonal offices will be opened to strengthen the health services. Details of the programme are as follows :

Hospitals : In order to raise the level of health services the Department of Health will convert 58 existing hospitals and the Hetaura health centre into 25-bed hospitals. Seven more district hospitals and 11 health centres will be converted into 15-bed hospitals.

Health Centres : During the Plan, 32 health centres will be provided with doctors and necessary equipment. These health centres will be divided into two groups. Each group will consist of 16 health centres. Both of these groups will be provided with doctors except that the first group will also have lady doctors. The second group will have assistant nurse midwives instead of lady doctors.

Health Posts : During the Plan period 103 health posts will be established. These will be under the control of the district health organization with 3 to 5 helth posts in each district where they are established. Each health post will have 3 to 6 mobile teams to cover assigned areas of the district.

Zonal Offices : During this Plan period, 8 new zonal offices will be established, which will be helpful in the supervision of local health units. There will be hospitals with 50 or 25 beds under these zonal offices.

Training Programme

In order to implement successfully the health services programme by making available trained personnel the following training programmes have been incorporated in this Plan :

Nurse Training : Under this programme the construction of a Nurses' Training School in the Bir Hospital compound will be completed. Hostel facilities will be provided to the nurse trainees and the annual intake of trainees will be increased from 30 to 40.

Auxiliary Health Workers Training : This Plan aims at training 60 auxiliary health workers every year, for which adequate provision of buildings and hostel facilities will be made. In order to make the programme effective, training will also be given to persons working in the malaria eradication department and they will be reassigned. This will become possible as the malaria programme nears the maintenance phase.

Training of Assistant Nurses and Midwives : As the Bharatpur centre alone cannot meet the country's demand for assistant nurses and midwives, new training centres will be opened in the Plan period at Biratnagar and Nepalgunj. Forty additional assistant nurses and midwives will be trained in these centres every year.

Medical College : At present, about fifteen persons are sent abroad for medical training each year. Of these, about 10 return as qualified doctors. At present, there are only two hundred doctors in Nepal. The ratio between doctors and population is 1 to 50,000. We have to train at least 100 doctors every year for the next several years in order to lower the ratio to 10,000. To provide a part of this training, a medical college will be established to start functioning within the Plan period.

Because a medical college must have an adequate associated hospital facilities, the present strength of the hospitals in Kathmandu will be increased to five hundred beds.

Miscellaneous

Family Planning : It is felt that the population of Nepal will grow at a faster rate as assured of the public health measures. Thus it will not be possible to increase the standard of living of the people unless the birth rate is checked. To do so, positive steps must be taken in the field of family planning.

In this Plan period, four family planning clinics, two in Kathmandu and one each in Patan and Bhaktapur, will start functioning under the family planning branch of the Directorate of Health Services. Family planning education will be conducted and family planning devices distributed on a limited scale. If the programme proves successful, it will be extended to other areas.

Public Health Laboratory : The construction of the Public Health Laboratory building, which was started under the Three Year Plan, will be completed within this Plan period. This laboratory will be concerned with pathological, epidemological, bacteriological and infectious diseases, and it will analyze water and food materials.

Ayurvedic System : As regards Ayurved, the present Ayurved College and Ayurved Hospital of Kathmandu will be expanded so as to make available more medical and training facilities. The Ayurvedic dispensary will also be reorganized and renovated. There will be improved reorganised coordination between the hospital and the college.

CHAPTER XXIV

Drinking Water and Sewage

Two things are necessary to create a healthy physical environment : (*a*) a supply of pure water in adequate quantity and (*b*) a sanitary sewage disposal system. It is necessary, therefore, to give emphasis to these works and a master plan for the supply of drinking water should be formulated from a long-term viewpoint. Such a master plan for the Kathmandu Valley is under preparation by joint efforts of His Majesty's Government and the World Health Organisation.

The Third Plan

Drinking Water : During the Third Plan period drinking water supply systems will be developed in all of the important urban areas. Priority will be given to the areas without easy access to drinking water. The schemes incorporated in this Plan are as follows :

Kathmandu : At present 8,182,800 litres of water per day are supplied to Kathmandu from the Balaju and Maharajgung reservoirs for a population of 180,000. The distribution system is in poor condition. A scheme to increase the water supply by 3200,000 gallons per day is underway. This scheme will be completed in the first year of the plan period, and will meet the requirements for the coming ten years. Fifty years from now, it is estimated that 9,000,000 gallons of water per day will be required. It appears from existing hydrological data that 15,000,000 gallons of water per day can be supplied from the Bagmati, Sialmati and Nagmati rivers. A master plan will therefore be framed to develop this long-term scheme.

Lalitpur : Lalitpur with a population of 49,000 is the second largest town of Nepal. Only 400,000 gallons of drinking water per day are presently available against a need of 1,000,000 gallons per day. A scheme to supply 3,500,000 gallons of drinking water per day will be implemented during this Plan.

Bhaktapur : Bhaktapur, with 34,400 population, is the third largest town of Nepal. The present supply of drinking water is 120,000 gallons per day. During this Plan period 1,140,000 gallons per day will be supplied to Bhaktapur.

Birgunj : Birgunj has a population of 15,000. During the Second Plan construction work was started on a scheme to supply 400,000 gallons per day. Construction will be completed in the near future.

Pokhara : During the Second Plan a water supply scheme was initiated in Pokhara which has a population of 30,000. When completed this project will supply 600,000 gallons per day.

Kirtipur : At present 30,000 gallons of water per day are supplied to Kirtipur with a population of 8,000. With the completion of the proposed scheme in Lalitpur, 400,000 gallons of water per day will be supplied to Kirtipur, Panga and the Tribhuban University Campus.

Thimi : Water supply at Thimi, Bodey, and Nagadesh is from tube-wells. A new scheme has become necessary as there is excess iron content in the tube-well water.

Rajbiraj : No water supply scheme has been provided for Rajbiraj with a population of 12,000. The main sources of drinking water are the rivers and some hand pumps. During this Plan period 300,000 gallons per day will be supplied to Rajbiraj by a project now under preparation.

Nepalgunj : Population is increasing rapidly in Nepalgunj which is inhabited now by 10,000 people. The present water supply is 5,000 gallons per day. A scheme to supply 28,500 gallons per day is underway and will be completed during this Plan period.

Janakpur : Janakpur with a population of 8,000 is still dependent for its water supply on a distant river and a few hand pumps. A scheme to supply 360,000 gallons per day will be completed during this Plan period.

Bhairawa : At present Bhairawa with a population of 7,500 depends for its water supply on a river and some hand pumps. A scheme to supply 150,000 gallons per day is underway and will be completed soon.

Bhadrapur : Bhadrapur with a population of 6,000 is devoid of a modern water supply scheme. It has to depend on river water. Investigation is underway in order to provide 140,000 gallons of water per day. Construction work will be completed during this Plan period.

Dhangadi : During this Plan period 150,000 gallons per day will be supplied to Dhangadi with a population of 6,400, which is in acute shortage of drinking water.

Banepa : The existing water supply system which was set up 25 years ago will be improved in order to make available an additional 40,000 gallons per day.

Dang : Hand pumps are the only source of drinking water for 4,200 inhabitants of Dang. A scheme will be implemented to supply 35,000 gallons per day.

Koilabas : During this Plan period a scheme will be implemented to to supply 75,000 gallons of drinking water per day in order to meet the present requirement.

Terai and Hill Areas : It is essential to make provision for drinking water in some villages of Terai and the hills which are urgently in need of it. Under this scheme 35,000 gallons per day will be made available in different places to be selected later.

Sewage Construction : At present, the only sewage system in Nepal of any consequence exists in some areas of Kathmandu. In the absence of a modern sewage system, disease epidemics frequently occur. It is therefore essential to develop a sanitary sewage system along with the provision of drinking water.

With the assistance of the World Health Organization, preliminary work has been started to formulate a master plan (Nepal.14) for the provision of drinking water and a sewage system for the Kathmandu Valley. A detailed survey is necessary for the construction of a sewage system in Kathmandu as the next step. This program should be coordinated with the proposed master plan for the Kathmandu Valley. During this Plan period, the survey will be completed and construction started.

Experimental Village Sanitation Programme : This programme consists of both a water supply and a sewage disposal system. It will be started on an experimental basis in the three villages of Lalitpur, with the assistance of UNICEF. Under this programme a workshop will be established for the maintenance of the water supply system and necessary materials will be made available for the implementation of the schemes.

Drinking Water Survey : In order to collect necessary information for the formulation of water supply schemes, surveys will be undertaken. This will be linked with the water resources survey discussed elsewhere.

CHAPTER XXV

Housing Programs

At various cities in Nepal the problem of housing has become a severe one. Particularly in Kathmandu and Patan population is increasing at the rate of 2.2 p.c. due to the mobility of people and the natural increase of population. The present population of Kathmandu and Patan is 1,71,000 whereas the number of houses at these two places is only 22,534. On the basis of one house required for one five-member family unit 34,200 houses are needed in Kathmandu and Patan alone, which means that an additional 11,686 houses are needed.

In the first two plans, there was no provision for housing. Keeping in view the limited resources available and the preliminary nature of the work, the housing program will be launched on a limited scale during the Third Plan. Since 1950, a keen interest has been shown towards the construction of houses in the private sector. These new houses however, are designed especially for the purpose of renting to foreigners, and the requirements of the common people have not been met. His Majesty's Government has been advancing three years' salary to the civil servants for the construction of houses as a further inducement. However, this amount is quite inadequate to cover construction costs, especially for middle class civil servants.

Targets of the Third Plan

Housing

His Majesty's Government will provide necessary incentives to the private sector in order to construct 400 new houses in Kathmandu, particularly for the use of the middle and low income groups.

In addition, 51.28 hectares of new plots of land will be acquired during the plan period. Utilities such as water, electricity, schools, roads, etc., will be arranged on this land and plots will be sold to persons interested in constructing houses. If necessary, the land will also be sold on an installment basis.

Town Planning

In order to develop the city areas in Kathmandu Valley, a master plan for Kathmandu and Patan is under preparation. Master Plans for neighbouring cities will also be prepared during the plan period. On the basis of such plans, steps will be undertaken to improve the city area of the Kathmandu Valley.

Building Construction

Since adequate facilities are not available for offices and the living quarters of government servants in the various districts, office buildings, living quarters for government servants, guest houses for tourists and inspection teams, jails, police offices etc. in various districts will be constructed. A laboratory will also be constructed during the plan period by the Building Department of HMG to test construction materials.

CHAPTER XXVI

Publicity, Broadcasting and Cultural Advancement

In order to achieve success in a development plan the full cooperation of the public is necessary. From this point of view, the role of publicity and broadcasting agencies is quite important as media to bring to the notice of the public the policies and programmes of the Government.

Publicity

The Publicity Department has been publishing booklets and photographic materials for general distribution. During the Third Plan period the aim is to modernise the existing program with the following improvements :

Printing Press

A modern printing press will be set up to print government publications which are gradually increasing. A building will also be constructed in which to install the printing press.

Zonal and District Publicity Centres

With the development of the panchayat system and the decentralization of government functions, it is essential to make the publicity organization strong and to start publicity both at the zonal and district levels by distributing publications of various kinds. Therefore, in the Third Plan, these centres will be established and strengthened.

Film Production

Documentary films from various aspects of Nepal are, at present, being produced. During the Plan period the production and distribution of such films will be increased.

Gorkhapatra

Gorkhapatra is a self-supporting body. Its publications include one daily and one weekly newspaper. As a part of the financial assistance to this body, one linotype machine and other press equipment will be made available to it during the Plan period.

Broadcasting and Cultural Enhancement

Construction of a new studio building was begun during the Second Plan to improve the broadcasting system. In addition, more than 200 listening centres have been set up during the same period. It is planned to expand the existing broadcasting net-work during the Third Plan. A new 100 kilowatt transmitter and two medium wave transmitters of 1 kilowatt each will be installed in Kathmandu. When completed, it will be possible to broadcast the programmes of Radio Nepal, not only inside the country, but also to the whole of Asia. In addition, 800 receivers will be set up in local listening centres. Ultimately, there will be one listening centre for each village panchayat.

Two zonal stations of 5 kw. each will be established, one in eastern and one in western Nepal. These stations will broadcast programs which have local importance and, thus, local interest. In order to develop the broadcasting system in the country, arrangement has been made to provide training to the staff of Radio Nepal in radio programming and related technical fields. Also an administrative building will be built for Radio Nepal during the Plan period.

Steps will be taken to preserve Nepal's cultural heritages in the form of music, dances, etc. One national hall for music and dancing with modern amenities will be constructed in Kathmandu.

CHAPTER XXVII

Statistics

The first crude population census was taken in Nepal before the time of the first Rana Prime Minister, Jung Bahadur, more than a century ago. Since 1911, enumeration has been attempted at approximately ten years intervals. Nevertheless, it was not until 1952-1954 that the first population census was conducted along modern lines. Shortly thereafter, the need for various kinds of data for the development of the country was realized. The Department of Population Census was dissolved and the present Central Bureau of Statistics was formed in 1958 under the Nepal Statistics Act.

In view of the limited resources and experience available in the country, the full use of trained manpower and available resources could not be mobilized in all of the fields of statistical study. The enitre responsibility of the few trained personnel were utilized largely for census taking purpose.

Over the past five years, however, the situation has begun to improve. A Census of Population was conducted in 1961 and a Census of Agriculture in 1962. The first estimate of national income of Nepal for the year 1961-62 was also completed. In the field of industrial data, a list of existing industries has been prepared and published. In 1965, the collection of industrial statistics will be started. Such data will make it possible to prepare more comprehensive national income data.

Foreign Trade data covering the period 1955-1961 have already been published. The collection of data for the year 1962-63 is almost finished. In 1962, a data was compiled on the basis of declaration forms introduced in the same year. In addition, various, indexes and other miscellaneous data have also been collected and published.

The Third Plan

The main objective of this Plan is to make basic data on Nepal available to individuals and organizations belonging in both the private and public sectors. Instead of merely collecting basic data on population, agriculture, industries, etc, an aim of the Plan is to publish information on industries and commerce which will help to determine the social as well as economic activities of the people. The following activities have been included in the Third Plan :

Population Census

The preliminary report of the 1961 Population Census has been published. The detailed report will be published in 1965. The next Census of Population will be conducted in 1971 ; hence preparatory steps will be taken between 1965 and 1970.

Agricultural Census

The detailed report of the Agricultural Census of 1962 will be published. Sample surveys of crop production will be conducted each year and published. Similarly, livestock data will be collected on a sample basis from time to time.

Industrial Survey

With an aim of collecting data regarding industrial output and other related information in Nepal, an Industrial Survey will be conducted every year. This survey will also encompass small industries scattered throughout the country.

Domestic Trade

Since the present knowledge about domestic trade is very limited, a survey will be made to collect necessary data regarding important trade centres.

Vital Statistics

The collection of Vital Statistics will be started first in the major cities. Within the plan period, all cities in Nepal will be included. Later, this activity will be extended gradually to the whole country.

Price Statistics

The collection of price data and the calculation of price indexes for both the Terai and Kathmandu regions will be continued. More commodities and places will be covered to make it more comprehensive.

Family Budget Survey

The present family budget survey of certain areas in Kathmandu will be gradually extended to cover Bhaktapur, Lalitpur and some cities of the Terai as well.

National Income

Preliminary estimates of national income, prepared first for 1961-1962, have also been prepared for 1964-65. During the plan period further improvements will be made in these estimates and additional data included on expenditures, savings, and capital accumulation.

Miscellaneous

Statistics on foreign trade, aviation, railways, road transport and education will also be collected systematically and published. Administration of the Central Bureau will be reformed and improved. Modern equipment will be arranged to process the survey results quickly and efficiently. A new building will be provided to house staff and equipment.

CHAPTER XXVIII

Hydrological Survey

In order to develop irrigation, drinking water and hydro-electric power, hydrological data are very essential. Collection of hydrological data for different rivers and streams was begun during the Second. A Hydrological Survey Department was set-up to collect this information and to develop forecasting statistics.

Fifty-one gauging stations were installed on various rivers in Nepal. Three stations to record the volume of water were established on the Karnali River.

The Third Plan

Gauging Stations

During the Third Plan, 49 additional gauging stations will be established. Necessary data with regard to the volume of water flow in various major and small rivers of Nepal will be made available from these stations. In the future, this will facilitate the determination of the power generating capacity of Nepal water resources.

Ground Water

Apart from the water flowing on the surface, the other main source of water for irrigation and drinking purposes is ground water. Nothing has been done in this direction so far. During the plan period, surveys will be made to determine the possibility of using ground water in the Kathmandu Valley and Terai Region.

Quality Sampling

Twenty surface water sampling stations will be established to analyse the quality of water. Nineteen ground water sampling stations and 40 sediment sampling stations will also be established.

Forecasting Stations

Seventy stations will be established to collect rainfall, temperature and other weather data. During the Plan period, weather forecasting will be introduced.

Organization

Four zonal level offices will be set up to supervise workers in various areas. One central laboratory will be established to analyse the quality and the volume of water.

CHAPTER XXIX

Administrative Reform

The speed of economic development does not depend only on capital and labour, but also upon Government administrative capacity. Since His Majesty's Government must bear a major responsibility for achieving rapid economic development of the nation, necessary improvements in the organization and operation of all aspects of government must be implemented. Administrative improvement was stressed in the Second Plan and, as a result, considerable progress was made.

Training facilities have been made available at several levels of government service. New methods and techniques of administration were introduced. Better performance, particularly by staff at the lower levels, has been achieved. Many accountants serving in all ministries and departments were trained under the Accountant Training Programme in order to maintain accounts in accordance with up-to-date procedures. New procedures in budgeting and fund releases were helpful in effective execution of developmental activities.

In spite of these achievements, further changes in the administrative system are necessary for the successful implementation of the Third Plan and of subsequent plans. In view of the increasing volume of work in ministries and departments, the creation of new sections and sub-sections, and the appointment of new staff continuous improvement in administrative regulations and organization is required. As such, the study of departmental organization and recommendations for improvement will be continued. In addition to the administration of government various public sector industries must also be properly managed and guidance provided the private sector. The latter activities differ from the general activities of Government administration : thus study and analysis are necessary. In order to meet these diverrse requirements, the following steps will be taken :

Reform in General Administration

In the Third Plan, the goal will be to creat an effective and efficient administrative structure in the entire government. To achieve this target, heavy emphasis will be given to personnel improvement and revision of administrative policies and procedures. Specifically, the following steps will be taken :

Pre-Service Training

A pre-service training programme will be conducted for all the new employees of His Majesty's Government, especially the inexperienced employees recruited upon completion of a degree programme with one of the educational institutions.

In-Service Training

Under this training programme, government servants will be made aware of the importance of modern administration, administration relating to manpower, administrative procedures, budget, statistics, planning, etc. The training standard will be fixed according to the grade, ministry or department and the work of the government servants. The programme will be conducted through the medium of lectures, debates and educational films. Experience in practical application of knowledge will also be stressed.

The training activities will take place in the present administrative training centre. For the training of lower level staff, Government will encourage the concerning Ministries initiated training programmes.

Reform in Personnel Management

Training alone is not sufficient to bring about improved administration. This also requires reform in staff appointment and promotion policius. Necessary changes will be effected in the civil servant enlistment procedures. Existing personnel policies and management are out of date and cannot cope with future needs. Hence, during the Plan period, consideration will be given to the creation of a separate unit to strengthen and reorganize matters relating to personnel management.

Administrative Procedures

With the expansion of governmental activities, daily administrative procedures become more cumbersome. In order to make the procedures simple and yet effective, correspondence methods and filing systems will be studied and improved as required. Special effort will be made to avoid unnecessary paper work, and to define staff responsibility and authority in a manner consistent with the functions of various administrative units.

Maintenance of Equipment

As administrative procedures are modernized, use of office machines are also increasing. Thus a central unit will be created for maintenance and repair as well as to provide spare parts for the equipments.

Accountant Training

The existing Accountant Training Programme will be expanded. Arrangements will be made for training accountants in various districts. The current training of clerical staff will be further expanded.

Advisory Services

One of the major factors lacking in administrative organization at present is an advisory staff to assist high level officials in the various ministries. Such units could be effectively used in studying and providing recommendations on training, reform in administration, personnel management, data collection and related subjects. Therefore, efforts will be made during the Plan period to provide an advisory staff to each ministry.

Administrative Reform in the Industrial Sector

Requisites for an efficient industrial administrator are different from the requirement for a general administrator. The smooth functioning of industries requires, in addition to general administrative knowledge, the knowledge of marketing, accounting, labour and related factors. Such knowledge is every limited in the industries of Nepal which are in their initial stages of development. Hence, special attention will be given to this matter during the Plan period. In meeting short term requirements, short period training will be provided within the country, and industrial inspection tours in neighbouring countries will be arranged so that industries in both the public and private sectors will be run efficiently. For the long term, more persons will have to be given specialized training. These people will be sent abroad for higher educational training.

Customs and Taxation Administration

In order to adequately finance developmental activities, mere passing of various taxation laws will not be sufficient ; rather the government will have to increase its sources of income . Taxes must be assessed on a scientific basis and conditions created for their regular collection. Therefore, steps will be taken during the Plan period to improve the customs and taxation procedures of His Majesty's Government. Since training is the base of efficient administration, customs and taxation officials will be given necessary training. Office buildings will be provided in districts where there are no customs and taxation offices at present.

CHAPTER XXX

Sports

As compared to other developing countries, Nepal is far behind in the field of sports also. After the political change of 1950 the Nepalese have shown their interest in sports by organizing various national sports organisations and national competitions. Moreover, Nepalese sportsmen have started taking part in international competition. Nepal participated for the first time in the 1964 world Olympic Games held in Tokyo. Inspite of these efforts, significant progress has not yet been achieved. It would not be unfair to say that in recent years the general standard of sports in Nepal has been rather discouraging.

One of the main reasons for the current state of sports is the lack of adequate encouragement provided by the government in this field. Some steps were proposed to develop the sports during the Second Plan. But these steps were not implemented. Therefore, during this Plan period, every effort will be made to attract the interest of the people in the field of sports. To achieve this goal, the National Council of Health and Sports will be activised. In addition, programmes on sports and physical education under the direction of the Education Ministry will be launched to popularise sports at the school and college level. Construction of one stadium, one auditorium and one swimming pool, which were already planned in the Second Plan, will be undertaken during this Plan period.

PART III

IMPLEMENTATION

CHAPTER XXXI

Improvements in Organization and Management

In implementing any plan, every effort must be made to anticipate difficulties and to take steps to remove them. Although it is recognized that not all of the problems can be anticipated, there are a number of areas which clearly need attention and improvement. A few of the most critical will be discussed below.

Annual Plans and the Development Process

Implementation of the Five Year Plan necessarily takes place on a periodic basis through annual budgeting. Annual programmes must be submitted and incorporated in the development budget. In the submission, quarterly work programmes must be included. Because annual budgets reflect the financial resources available at the time of preparation, they cannot be fully anticipated a few years ahead. Therefore, flexibility is necessary in plan implementation.

Annual plans must further take into account manpower, materials and other resources available. Targets for each year, moreover, should be specified within the framework of the Five Year Plan targets. Coordination if interrelated plans must be achieved in an annual basis as well.

Project Preparation

The successful formulation and implementation of any development plan depends heavily upon careful study and preparation of project and programme proposals. Unless projects are based upon a thorough study of all of the factors involved and prepared with a realistic time perspective, their implementation will run into difficulties and delays which will adversely affect development performance. Further-more, projects in such areas as irrigation and power must be selected from among a variety of alternative possibilities. Unless careful analysis takes place, the projects included in the Plan may not be the ones which would provide maximum to the nation.

Coordination at the Local Level

Coordination of development activities is necessary at all levels, national, district and local, if available resources are to be most effectively utilized. Poor coordination results in scarce technically trained manpower being less than optimally utilized. Activities are delayed because of shortage of construction materilas, and duplication of effort occurs. Limited coordinative efforts at the local levels have been made by district governors and other local officials. His Majesty's Government has adopted a decentralization policy which should make it possible to more effectively coordinate activities at the local levels.

Progress Reports

An effective reporting system is necessary to keep abreast of the progress of development activities. The frequency of such reports will depend on the kind of activity involved. Reports covering construction projects should be submitted more frequently than, for example, reports on teacher training operations. As bottlenecks and difficulties arise and are reported necessary corrective action can be taken. Periodic inspections of projects are also necessary. In order to assure prompt corrective action when and where difficulties arise, review of many projects can be undertaken at the zonal level. A few zonal offices were established for this purpose in the Second Plan ; facilities will be extended to all fourteen zones in the Third Plan.

CHAPTER XXXII

Decentralization

The importance of the panchayat system in securing mass support for national and local development programmes and the need for decentralization to further generate support have already been mentioned. In order to generate greater public support, to coordinate local level activities and to effectively implement plans, more responsibility needs to be given the 3,600 village, 75 district and 14 zonal panchayats. During the Plan period, with the implementation of decentralization, greater authority will be given the local and district panchayats. The development of health, education, agriculture, roads, and similar functions at the local level will be shifted gradually to the district panchayats. The district will, in turn, delegate many of these functions to the village panchayats. In order to achieve the objectives of decentralization, district administration will be reorganized and staff upgraded and given the necessary training.

In order to ensure the successful implementation of decentralization, the steps must be carefully planned and actual achievements kept under continuous review. The decentralization programme will therefore be undertaken in three phases. Greater power will be given the district panchayats as the programme advances through the three phases. These have been identified as preliminary transitional and permanent.

Preliminary Phase

The purpose of the preliminary phase is to establish the administrative and organizational relationships necessary at the district level. The present dichotomy between 75 separately demarcated panchayat districts and 35 administrative districts will be eliminated. The present situation is responsible for considerable confusion and overlapping responsibilities. In its place, 75 district administrative officers will be appointed, one for each panchayat district. This officer will take over the responsibilities presently given to district governors and Panchayat development officers. The district officer will be responsible to the central government through the zonal administration.

Transitional Phase

In the transitional phase, various programmes presently operated from the centre will be transferred to the district panchayats. In addition, all central department personnel operating at the district level will be taken into the administrative and technical staff of the district panchayats. The central department will work through the district officers rather than directly as in the past. Personnel required for the third phase will be hired and given training in the second phase.

Permanent Phase

Under the third phase, effective district administrative structure will be established and staffed with well-trained personnel. All district level activities except the maintenance of law and order will be under district panchayat authority. Under this phase, local development within the guidelines set by the national government will be the responsibility of the district and village panchayats. The following will be undertaken at the village panchayat level :

1. Cadastral survey and maintenance of records on land ownership, tenancy, etc.
2. Provision of production credit to tillers, marketing of agricultural products through the establishment of multipurpose cooperative societies.
3. Provision of agricultural extension services, in order to improve agricultural practices and increase output.
4. Land revenue collection, following the abolition of the zamindar system.
5. Operation and expansion of primary education.
6. Provision of local health centres.

7. Construction and maintenance of minor irrigation works.

Because of the costs and trained manpower required, all villages cannot be covered by permanent decentralization during the Third Plan. In the first year, the permanent phase will be implemented in a few village panchayats in selected districts and gradually expanded in coverage over time.

The activities will be handled by the administrative staff of the village panchayats and the cooperative societies. The district level staff will provide technical support and guidance.

Those decentralized activities which cannot be effectively decentralized further to the village level will be handled by the district organisation. Examples are land administration, agricultural industry development. Moreover, the preparation of the annual and periodic Plans for the district will be done at the district panchayat level, which formulating such plans, the district panchayat will take into account the activities of the village panchayats.

Implementing different phases of decentralization

It is desirable to execute the different phases of decentralization in a planned way. The implementation of decentralization needs sufficient economic resources, training and supervision, hence it should be extended gradually. Actually, the programme of permanent phase will be implemented in one district. It will then be possible to expand this to other districts on the basis of experience gained. The different stages of decentralization will be executed in the Plan period as given below. The district officer will be administratively responsible. An agricultural officer, a land officer, a public services officer, and a non-farm development officer will assist him in this work.

Year	*Preliminary*	*Transitional*	*Permanent*
1965-66	67	5	3
1966-67	60	10	5
1967-68	50	15	10
1968-69	40	20	15
1969-70	—	22	20

Zonal Level Organisation

The central government staff will operate from both the central and zonal levels. At lower levels, departmental contrcts will be with the district panchayats and not directly with the professional personnel at the district and village levels. Under the decentralization programme, the zonal commissioners will have authority for the following :

1. Maintenance of law and order within the zone.
2. Coordination of activities of the various central departments.
3. Supervising the work of the chief District officers as it relates to his Majesty's Government and providing necessary guidance.
4. Implementation of the decentralization programme within the zone.

CHAPTER XXXIII

Construction Materials, Labour and Transport

In the past, shortages of construction materials, labour, and transport delayed the implementation of development projects. Therefore, steps will be taken to avoid these difficulties in the future.

Organization of Labour Supply

The number of workers engaged on development projects in 1964-65 is estimated at 50,000. By 1969-70, labour requirements are expected to rise from 300,000 to 400,000. Many of the Second Plan projects were faced with labour shortage and resultant delays. Among these were the Trisuli Hydel, the Khageri Irrigation, the Kathmandu Drinking Water and the Sonauli-Pokhara road projects. The bulk of the labour supply consists of cultivators on a part-time basis. Problems of instability of supply result since the workers leave to return to their farms at planting and harvest times. No large group of workers as yet treats construction work as permanent employment. Steps must be taken to attach the present workers more or less permanently to the non-agricultural sector. Among the steps to be taken to meet these problems are :

1. To establish an agency to mobilize labour, to administer labour welfare measures and to train workers.

2. To open employment exchanges in major district centres

3. To provide living quarters and fair price shops in large project areas.

4. To provide health and education facilities near major project sites.

5. To resettle workers in areas near construction projects.

6. To establish pioneer groups for development projects.

In this effort, close contact will be maintained with the panchayats and class organizations. Efforts will also be made to utilize retired military personnel in these activities. Mobile training terms will train construction workers.

Construction Materials

Of the total Plan expenditures, it is estimated that some 45 per cent or Rs. 1,000 million will be sent on construction. Necessary construction materials must be made available at or near the project sites as needed. In order to accomplish this, data are necessary on quantities of materials required, the amount locally avaliable, and required imports.

In the light of past experience, the quantities of several items required are estimated below :

Table 26. Construction Materials Required, 1965-70.

Material	*Unit*	*1965-66*	*1966-67*	*1967-68*	*1968-69*	*1969-70*	*Total*
Cement	Ton	50,000	90,000	130,000	140,000	160,000	570,000
Construction Steel	Ton	7,000	10,000	15,000	18,000	20,000	70,000
Corrugated Sheet	Bdls	13,500	16,000	19,000	23,000	28,000	99,500
Timber	Cuft	1,000,000	1,200,000	1,300,000	1,500,000	1,600,000	6,600,000
Bricks	Million	100	150	170	200	220	840

Although the above figures may appear to be excessively high in the light of past experience, these quantities are required to implement the development projects. During the Second Plan, for example, 100,000 tons of cement were used. By comparison, the 570,000 tons for the Third Plan may appear too high, but more and larger projects requiring cement have been included in the Third Plan.

During the Second Plan, 15,000 tons of iron rods and 16,000 bundles of corrugated sheets were used. During the Third Plan, 70,000 tons of iron rods and 100,000 bundles of corrugated will be needed. The National Trading Corporation will be responsible for importing the bulk of these supplies.

Nepal has a substantial volume of timber resources. The present saw-milling capacity is some 1710 thousand cubic feet per year. The Timber Corporation of Nepal plans to increase its capacity by some 5 lakh cubic feet during the Third Plan. By 1970, total production capacity in Nepal is expected to rise to 3000 cubic feet per year. Therefore, 66,00,000 cubic feet estimated requirement can be easily met.

Brick production presently is wholly on a village industry basis. Data on brick production capacity are not available. Strong steps must be taken to expand brick production to meet the requirements. A brick and tile factory will be established in Kathmandu with an annual capacity of 30 million bricks and 2.5 million tiles.

Aside from these construction materials, lime, glass, and other components are also required. Heavy equipment requirement will be estimated and steps taken to ensure an adequate supply.

The material requirements discussed above do not include the quantities to be importe into Nepal directly by the aid-giving nations for use on projects with which they are associated. Among these are the East-West Highway, the Sonauli-Pokhara Road, the Trisuli Hydel Project, the Chatra Cannal, and the Kathmandu—Kodari Road. India, the U.S.S.R., China, the United States and other nations will be providing a part of their assistance in this fashion.

Transportation

It is essential to provide transport in order to have materials available for the smoother execution of development activities in the public and private sectors. In the past Plans, many targets could not be achieved because of transportation bottlenecks. Even to-day, scheduled arrival of materials as regard is a major problem.

The estimated materials requirements for the Third Plan for cement, iron, corrugated sheets and timber are 5,70,000 tons, 7,000 tons, 100,000 bundles and 6,600,000 cubic feet respectively.

The volume of goods which must be transported into Nepal and to points within Nepal will increase during the Third Plan. This reflects not only the increase in the volume of construction materials which will be needed but also the movement of foodgrains and the increased consumers goods which will be purchased as income levels rise. Most of the major development projects are located in the Terai. North India rail and truck facilities will be used to deliver these goods to the border. In the hill areas where roads are still not developed, porters will be utilized.

One possible sources of delay is the clearance of goods for Nepal through Calcutta ports. In order to expedite clearance, a clearing and forwarding section will be created within the National Transport Corporation.

This corporation will work on behalf of the various projects and help to clear the foods from Calcutta port.

Even in Kathmandu Valley, which has good transport connections with India, there were shortages of supplies during the Second Plan because of transport limitations. In 1965-66, an everage of 700 tons of goods per day is expected to move into Kathmandu. This is expected to rise to 1,000 tons per day by 1970. This total includes all goods, not just construction materials. The elimination of transport bottlenecks is essential not only to ensure a smooth flow of materials to development projects but also to help stabilize market prices in the Valley.

The condition of the Raxaul-Amlekhganj railway is very critical. It can no longer be depended upon as a reliable means of transport, but should be used to the maximum extent possible.

The Kathmandu-Hetauda ropeway started operation in April, 1964 and has been working only one shift carrying an average of 200 tons per day. In the first year of the Third Plan, the ropeway operations will be expanded to three shifts (24 hours) with a capacity of 600 tons daily. For, this, the job training programme has been underway and will be completed in the first year of the Thied Plan.

The Nepal Transport Corporation will utilize the Raxaul-Amlekhganj railway, 300 trucks and the ropeway to transport 1000 tons of goods per day from Birgunj to Kathmandu.

The transport facilities will expeand over the Plan period. To ensure their maximum use and to Provide facilities throughtout the country, a transport Organization was established.

It will help to achieve the targets set forth in the Plan. The transport organizations activities will coordinate with other organizations dealing with transport such as RNAC and the National Transport Corporation.

PART IV

APPENDIX

METRIC CONVERSION

Measurement

1 Bigha = .6667 Hectare
1 Acre = .40485 Hectare
1 Ropani = .05218 Hectare
1 Matomuri = .01282 Hectare
1 Square Inch = 6.45159 Square Centimetres
1 Square Foot = 9.29028 Square Decimetres
1 Square Yard = 0.83612 Square Metre
1 Square Mile =258.99824 Hecatres

Weight

1 Pound = 0.4536 Kilogram
1 Seer = 0.9330 Kilogram
1 Dharni = 2.3325 Kilogram
1 Maund = 37.3200 Kilogram
1 Ton = 0.98214 Metric Ton
1 Gallon = 4.5460 Litre
1 metric ton = 1000 Kilogram

Table No. 1.

Comparative Study of Estimated Gross Domestic Product of Nepal, Based on the Current Market Price.

(*Rs in Million*)

Sources	*1961-62*		*1964-65*	
	Rs	*Per cent*	*Rs*	*Per cent*
1. Agriculture[1]	2338	63.85	3443	65.15
2. Mining	17	0.45	20	0.39
3. Industry	32	0.85	35	0.66
4. Construction[2]	141	3.76	172	3.25
5. Transport	37	0.99	91	1.72
6. Cottage Industry	415	11.34	539	10.20
7. Economic Organization	22	0.59	69	1.31
8. Ownership of Dwellings	338	9.02	423	8.00
9. Law and order	77	2.05	82	1.55
10. Public Utilities[3]	1	0.03	1	0.02
11. Commerce	214	5.74	240	4.54
12. Other Services	50	1.33	170	3.21
TOTAL	3682	100.00	5285	100.00

1. Include forest and medicinal plants
2. Increase mainly because of the expansion of construction works in the public sector.
3. It includes only electricity.

Table No. [illegible]

His Majesty's Government's Revenue Projection 1956-57 through 1964-65

(*Rupees in Lakh*)

Serial No.	*Source*	*1956-57*	*1957-58*	*1958-59*	*1959-60*	*1960-61*	*1961-62*	*1962-63*	*1963-64*	*1964-65*
1.	REVENUE & TAX									
	Land Revenue	160	176	185	256	200	282	530	530	490
	Custom	287	294	343	378	404	392	466	593	794
	Income Tax	—	—	—	—	—	—	20	27	48
	Miscellaneous	3	3	4	28	9	21	17	24	24
2.	GOVERNMENT ENTERPRISE									
	Forest	75	77	81	120	120	87	98	134	120
	Interest & Divident	—	—	—	—	21	10	6	25	104
3.	MISCELLANEOUS	142	154	151	84	220	118	160	247	209
	TOTAL	667	704	764	866	974	910	1297	1580	1789

Source : Ministry of Finance, His Majesty's Government

Table No. 3.

HMG's Surplus, Deficit, and the Regular Expenditure

(Rupees in Lakh)

Serial No.	*Fiscal Year*	*Income*	*Expenditure*	*Surplus*	*Deficit*
1.	1956-57	667	664	3	—
2.	1957-58	708	838	—	134
3.	1958-59	764	798	—	34
4.	1959-60	866	861	5	—
5.	1960-61	974	1101	—	127
6.	1961-62	910	1035	—	125
7.	1962-63	1297	1244	53	—
8.	1963-64	1580	1177	403	—
9.	1964-65	1789	1231	558	—

Source : Ministry of Finance, His Majesty's Government.

Table No. 4.

Position of the Various Sectors of the Economy in 1961-62 and 1964-65 and the Targets of the Third Five Year Plan

Subject	Unit			*As of 1961-62*	*As of 1964-65*	*Target for 1969-70*	*Target of the Third Five Year Plan In Total*
A. AGRICULTURE							
1. Increment in the Foodstuff	1000	Metric	Ton	3,145[1]	3,271[1]	3,776[1]	
2. Paddy	,,	,,	,,	2,102	2,201	2,368	
3. Wheat	,,	,,	,,	137	152	425	
4. Maize	,,	,,	,,	843	855	918	
5. Millet	,,	,,	,,	63	63	65	
6. Jute	,,	,,	,,	34	39	54	
7. Tobacco	,,	,,	,,	9	9	24	
8. Sugarcane	,,	,,	,,	139	126	252	
9. Oil seld	,,	,,	,,	48	51	60	
10. Improved seed	1000	Kilogram		1,560	615	175	
11. Egg	1000	Number		600	485	175	
12. Chicken	,,	,,		—	—	1,100	1,100
13. Fingerlings[2]	,,	,,		350	184	12	
14. Fish Farming Center		Number		6	6	9	3
15. Pasteurised Milk	1000	Litre		—	500	1,000	
16. Butter	1000	Kilogram		—	10	90	
17. Cheese	,,	,,		—	15	6	
18. Improved Animal Center		Number		2	5	3	
19. Seed Improvement and Horticultural Center		,,		27	—	12	
20. Veterinary Hospital		,,		11	33	45	12
21. Dairy Farming center		,,		33	33	—	
22. Agricultural Extension Center		,,		10	11	14	3
23. Poultry Farming Center		,,		—	3	3	
24. Pig Farming Center		,,		1	2	5	3
25. Sheep Farming Center		,,		1	2	5	3
B. IRRIGATION		Hectare		51,598	78,156	2,99,156	2,21,000

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[1] Include paddy, wheat, maize and millet.

Table 4 (*continued*)

Subject	*Unit*	*As of 1961-62*	*As of 1964-65*	*Target for 1969-70*	*Target of the Third Five Year Plan In Total*
C. FOREST					
1. Demarcation of the Forest Boundary	Mile	795	3,462	5,962	2,500
2. Construction of Fireline	„	140	396	696	300
3. Construction of Forest Path	„	76	406	1,156	750
4. Tree Plantation	Acre	972	6,000	31,000	25,000
5. Herbel Farming	Number	4	6	11	5
6. Herb Selling Center	„	2	24	29	5
7. Wild Lives Sanctuary	„	—	2	4	2
D. ROADS AND BRIDGES					
1. All Weather Road	Kilometer	701	773	1,653	880
2. Fair Weather Road	„	1010	1,858	2,578	720
3. Bridge	Number	35	45	48	3
4. Suspension Bridge	„	7	13	43	30
E. AVIATION					
1. All Weather Airport	Number	1	1	8	7
2. Fair Weather Airport	„	11	12	7	—
3. STOLL Airport	„	—	4	24	20
4. Improvement of Airport	„	16	13	19	6
5. Acquisition of Aeroplanes	„	9	16	19	3[a]
F. VEHICLES					
1. Acquisition of New Trucks	Number	—	—	300	300

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[a] Including aid of U S A and China.

G. POSTS AND TELEGRAPHS					
1. Telephone line Station (Including Extension)	Number	1,120	1,420	3,420	5,000
2. Branch Post Office	"	182	208	293	85
3. Cooperative Post Office	"	194	194	594	400
H. HEALTH					
1. Hospital	Number	39	42	52	16
2. Hospital Bed	"	903	1,025	1,500	475
3. Health Center	"	94	106	32[4]	32[5]
4. Malaria Eradication	Population	21,83,181[6]	37,01,823	57,88,000	—
5. Small Pox Control	"	21,825	34,4911	11,69,911	8,20,000
6. Health Post	Number	—	—	104[7]	104
7. Doctor	"	125	185	285	100
I. TOURISM					
1. Tourist	Number	16,044	40,090	60,090	20,000
2. Hotel Bed	"	105	270	670	400
3. Tourist Building	"	—	26	—	—
J. BROADCASTING					
1. Community Listening Center	Number	10	110	910	800
K. EDUCATION					
Primary Education					
1. Primary Education	Number	4,165	5,365	6,115	750
2. Students	"	2,40,000	2,84,000	5,43,067	—

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[4] To be established in the district headquarters only, hence the decrease

[5] To be operated as health centres

[6] Number covered by the Malaria Eradication Programme in the central zone

[7] 35 old health centres to be changed & 69 to be newly opened

Table 4 (*continued*)

Subject	Unit	*As of 1961-62*	*As of 1964-65*	*Target for 1969-70*	*Target of the Third Five Year Plan In Total*
Secondary Education					
1. Students	Number	62,000	117,000	185,000	68,000
2. Middle School	,,	585	748	898	150
Vocational Education					
1. Students	,,	175	1,883	8,600	7,500
2. Multipurpose School	,,	5	16	32	16
3. Hostel	,,	—	3	5	2
4. Laboratory	,,	1	11	16	5
Higher Education					
1. College	,,	13	33	36	3[a]
2. Students	,,	—	6,372	40	—
Adult Education					
1. Class	,,	1,878	6,578	15,078	8,500
2. Literate Adults	,,	54,000	1,71,000	2,71,000	1,00,000
L. COOPERATIVE DEVELOPENT					
1. Multipurpose Cooperative Society	,,	581	978	1,328	350
2. Cooperative Marketing and Credit Society	,,	6	14	30	16
3. Agricultural Cooperative Society	,,	—	—	10	10
4. Village Cooperative Industrial Center	,,	—	21	96	75
5. Coop. Consumer Society	,,	—	11	21	10
6. Members	,,	13,916	29,798	1,38,798	1,09,000
7. Credit	Rupee	25,25,000	41,88,353	44,43,88,353	44,02,00,000

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[a] Establishment of technical colleges (Agriculture, Medical & Engineering)

M. POWER		Kilowatt		8,982	13,412	73,412	60,000
N. INDUSTRY							
1. Jute	1000	Metric	Ton	15	19	34	—
2. Sugar	”	”	”	1	7[*]	43	—
3. Cigarette		Crore		25	41[*]	300	—
4. Cement	1000	Metric	Ton	—	—	61	—
5. Plywood	1000	Sq.	Metre	—	—	4,181	—
6. Paper	1000	Metric	Ton	—	—	15	
7. Soap	1000	Metric	Ton	Not available	11	23	
8. Cotton Textile	1000	Metre		” ”	495	18,496	
9. Wool	”	”		—	—	200	
10. Beer	1000	Litre		—	—	1,100	
11. Flour	1000	Metric	Ton	Not available	Not available	10	
12. Paint Varnish	”	”	”	—	—	1	
13. Cold Storage	”	”	”	—	—	3	
14. Solvent Extract	”	”	”	—	—	31	
O. TRAINING							
I. Agriculture							
1. B. Sc. Agriculture		Number		—	—	27	27
2. I. Sc. Agriculture		”		—	—	320	320
3. Diploma Train. (JTA)		”		214	529	649	120
4. General JTA		”		—	—	50	50
5. B. Sc. Home Science		”		—	—	10	10
6. I. Sc. Home Science		”		—	—	150	150
7. Home Science-JTA		”		—	22	42	20
8. Stockman & Supervisor		”		—	155	155	—
9. Training in Survey		”		—	420	1,420	1,000

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[*] Production capacity as of 1964-65

Table 4 (*continued*)

Subject	*Unit*	*As of 1961-62*	*As of 1964-65*	*Target for 1969-70*	*Target of the Third Five Year Plan in Total*
II. *Forest*					
1. Ranger	Number	52	120	295	175
2. Forester	„	130	240	593	350
III. *Engineering*					
1. Overseer & Draftsman	„	202	332	547	215
IV. *Health*					
1. Nurse and Midwife	„	27	111	461	350
2. Auxiliary Health Workers	„	166	327	727	400
V. *Education*					
1. Primary Teachers					
a. Newly Trained Teachers	„	4,250	5,000	6,000	1,000
b. Inservice Training	„	—	3,000	3,600	600
2. Secondary Teachers					
a. Newly Trained Teachers	„	215	1,000	1,200	200
b. Inservice Training	„	—	750	900	150
3. Vocational Teachers	„	—	60	77	17
VI. *Cottage Industry*	„				
1. Trained personnel in Cottage Industry	„	1,425	800	960	160
VII. *Panchayat*					
1. Panchayat Workers	„	862	—	—	—
2. Woman Workers	„	—	150	180	30

VIII. Cooperative Branch					
1. Cooperative Office	Number	—	605	876	271
IX. Technical Training					
1. Workshop (German Aid)	Number	—	250	300	50
X. Technical Industry					
1. Sano Thimi	„	—	—	75	75
2. Butwal Tech. Training Centre	„	—	—	150	150
3. Balaju Yantrasala	„	—	—	180	180
4. Postal Training Cenre	„	—	128	128	—
5. In-service Account Training	„	—	2,943	7,943	5,000
XI. HMG Administrative Training Institute	„	—	—	6,070	6,070

TABLE NO. 5

Foreign Aid Received During the Three Year Plan Period*

(*Rs in Lakh*)

Source	1962–63	1963–64	1964–65	Total
U. S. A.	453.00	725.21	767.00	2,945.21
India	136.00	361.79	545.00	1,042.79
China	32.00	110.00	320.00	462.00
Russia	200.00	452.00	223.00	875.00
U. K.	41.00	54.00	45.00	140.00
Others	50.00	75.00	90.00	225.00
GRAND TOTAL	922.00	1,778.00	1,990.00	4,690.00

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* Includes the following kinds of assistances :

(a) Aid received by HMG from the various donor countries for the development projects

(b) Expenditure incurred on materials required for development projects executed directly by the donor countries

TABLE NO. 6

Industrial Establishments and the Account of Investment*

Subject	1961–62		1962–63		1963–64		1964–65**	
	Number	*Capital in lakhs of* Rs.	*Number*	*Capital in lakhs of* Rs.	*Number*	*Capital in lakhs of* Rs.	*Number*	*Capital in lakhs of* Rs.
Public Limited	21	476	—	—	—	—	—	—
Private Limited	36	290	14	68	9	68	21	212
Private Firms	591	299	116	72	350	225	384	156
GRAND TOTAL	648	1,056	130	140	359	293	405	368

* based on fiscal years

** includes only registered firms

TABLE NO. 7

Pattern of Increase of Production of Various Crops and the Area
(*in Hectares*)

	Additional Area	*Wheat*	*Maize*	*Oilseed*	*Potato*	*Tobacco*	*Jute*	*Sugarcane*
1.	Kathmandu	17,000	200	...	...	...	...	...
2.	Kabhre Palanchowk	3,000	...	...	500	...	...	...
3.	Makawanpur	400	1,200	...	200	...	...	...
4.	Dolakha	1,538	...	...	...	...	...	...
5.	Ramechhap	1,570	200	...	...	...	...	...
6.	Okhaldunga	275	...	...	...	...	...	...
7.	Khotang	120	...	...	...	...	...	...
8.	Bhojpur	140	...	...		...	...	...
9.	Dhanukha	2,910	...	...	...	...	...	...
10.	Terhthum	970	2,000	...	500	...	...	...
11.	Illam	3,516	...	...	900	...	...	...
12.	Sindhu Palanchowk	740	3,500	...	500	...	...	...
13.	Baitedi	641	...	...	...	...	...	...
14.	Dadeldhura	1,091	...	...	...	...	...	...
15.	Doti	487	2,000	...	...	...	...	...
16.	Dailekh	236	1,500	...	...	...	...	...
17.	Sallyan	322	300	...	...	...	...	...
18.	Piuthan	70	200	...	...	...	...	...
19.	Nuwakot	1,411	...	...	300	...	...	...
20.	Dhading	1,026	1,000	...	...	...	...	...
21.	Qorkha	425	700	...	...	...	...	...
22.	Tanhu	1,465	1,000	...	...	...	...	...
23.	Lamjung	860	...	...	...	...	...	...
24.	Kaski	1,352	200	...	...	...	...	...
25.	Syangja	850	...	...	...	...	...	...

Table No. 15

Nepalese Studying Under the Scholarships Granted By Friendly Countries

Subject	India	China	America	Soviet Russia	U. k.	Other	Total
1. Engineering	118	17	18	52	6	38	249
2. General Education	180	1	37	10	27	35	290
3. Health	53	2	19	8	19	16	117
4. Industry	19	2	23	2	2	22	70
5. Agriculture	63	2	26	3	3	9	106
6. Aviation	—	—	—	—	3	37	40
7. Forestry	11	—	3	—	—	4	18
8. Custom and Tax	29	—	1	—	—	4	34
9. Administration	20	—	9	—	4	3	36
10. Arts	6	—	—	—	—	—	6
11. Police	6	—	—	—	—	—	6
12. Tourism	4	—	1	—	—	1	6
13. Communication	2	—	1	—	2	—	5
14. Mining	2	—	1	1	—	2	6
15. Survey & Statistics	4	—	3	—	—	—	7
TOTAL	517	24	142	76	66	171	996

Table No. 14

Export (1957-58 to 1961-62)
(*Value in '000 of Rupees*)

Division No.	*Items of Export*	*1957-58*	*1958-59*	*1959-60*	*1960-61*	*1961-62*
0.	Food (Including live animals for food)	4,77,93	8,79,06	9,88,93	15,85,72	17,41,36
1.	Beverages & Tobacco	18,26	8,87	9,18	24,83	21,40
2.	Crude Materials (except inedibles & fuel)	1,82,53	2,57,97	2,73,31	4,34,55	5,05,80
3.	Mineral fuels & Lubricants	77	22	7	77	15
4.	Animal & Vegetable Oil amd Fats	6,61	6,10	3,38	6,81	16,64
5.	Chemicals & Drugs	59	98	5,36	92	1,21
6.	Manufactured Goods classified chiefly by materials	11,35	16,10	23,14	19,45	3,44,08
7.	Machinery & Transport Equipment	47	—	19	1,07	1,27
8.	Miscellaneous Manufactured Articles	12,44	3,65	8,91	13,81	14,96
9.	Miscellaneous transactions & Commodities not specified elsewhere	22,14	6,39	4,63	9,44	5,33
	TOTAL	7,33,09	11,79,34	13,17,40	20,97,37	26,52,20

Source : *Export-Import data, 1961-62*, Central Bureau of Statistics, Ministry of Economic Planning HMG, Nepal.

Table No. 13

Import (1957-58 to 1961-62)
(Value in '000 of Rupees)

Division No.	*Items of Import*	*1957-58*	*1958-59*	*1959-60*	*1960-61*	*1961-62*
0.	Food (Including live animals for food)	3,87,71	4,30,25	6,58,62	5,51,79	6,37,68
1.	Beverages & Tobacco	1,32,26	2,15,31	2,06,48	2,18,12	3,92,75
2.	Crude materials (except inedibles & fuel)	93,03	77,81	1,32,68	2,03,36	2,59,19
3.	Mineral fuels & Lubricants	1,11,01	1,54,26	2,08,74	2,83,09	3,65,61
4.	Animal and Vegetable Oil & Fats	1,02,14	1,05,02	47,56	1,03,22	1,10,92
5.	Chemicals & Drugs	66,04	93,13	1,19,46	2,25,23	2,37,29
6.	Manufactured Goods Classified chiefly by materials	4,68,54	9,16,87	10,67,82	18,59,06	19,26,95
7.	Machinery & Transport Equipment	65,38	63,69	83,31	2,58,27	2,48,80
8.	Miscellaneous Manufactured Aritcles	1,11,33	1,21,26	1,87,11	1,63,76	2,31,66
9.	Miscellaneous transactions & Commodities not specified elsewhere	16,13	40,24	48,80	1,14,22*	34,29*
	Diplomatic Missions' Goods	29,93	16,09	1,14,62		
	TOTAL	15,83,56	22,33,93	28,75,27	39,80,12	44,44,14

Source : *Export Import data*, 1961-62 Central Bureau of Statistics, Ministry of Economic Planning HMG, Nepal

* Including Diplomatic Missions' goods

Table No. 11

Class and Number of Students in Primary Education, Requirement of Teachers by 1964-70.

Class	*Number of Students*					
	1964-65	*1965-66*	*1966-67*	*1967-68*	*1968-69*	*1969-70*
I	1,90,840	1,96,840	2,02,840	2,08,840	2,14,840	2,20,840
II	60,569	86,929	94,769	1,02,609	1,09,449	1,21,929
III	43,258	47,378	70,018	74,138	78,258	87,018
IV	34,607	37,007	39,407	60,327	62,727	69,767
V	17,803	20,138	22,461	24,790	45,630	56,590
Total	3,47,077	3,88,286	4,29,495	4,70,704	5,10,904	5,56,144
Increase of Student Each Year		41,209	39,209	39,209	38,200	43,240
Estimated Number of Teachers Required		1,000	1,000	1,000	1,000	1,000
Percentage Increase In School-Age Children		24.71%	30.7%	33.6%	36.5%	40.0%

Table No. 12

Class and Number of middle Mand High School Students in Secondary Education by 1964-70

Class	*Number of Students*					
	1964-65	*1965-66*	*1966-67*	*1967-68*	*1968-69*	*1969-70*
VI	12,000	18,305	19,110	19,915	20,720	21,525
VII	10,000	16,030	16,835	17,640	18,445	19,250
VIII	7,000	9,340	10,230	10,920	11,610	12,300
IX	6,000	6,810	7,020	7,230	7,440	7,650
X	5,000	6,810		7,230	7,440	7,650
Total	40,000	57,295	60,215	62,935	65,655	68,375

Table No. 10

Summary of the Key Industries to be Established in the Private Sector

Industry	*Estimated Expenditure (Rs in '000)*	*Unit*	*Production Capacity*
(A) *Based On Agriculture*			
1. Sugar	24,000	Ton	10,000
2. Fruit Canning and	1,000	Bottle of Squash	87,000
Preservation		Bottle of Jam	29,000
3. Brewery and	5,000	Gallon	2,50,000
Distillery		Gallon	6,00,000
4. Rice and	7,500	1000 Maunds	3,123
Floor Mill		1000 Maunds	2,593
5. Oil Mill	2,500	1000 Manuds/Year	1,205
6. Tea Factory	800	Maund	3,000
(B) *Based On Forest*			
1. Sawmill & Furniture	10,000	Cubic Feet	1,00,000
2. Plywood & Chipboard	8,000	Cubic Feet	4,00,000
3. Pharmaceuticals	3,000		48,000
4. Rosin and Turpentine	1,200	Ton	21,000
(C) *Textiles*			
1. Jute	15,000	Ton	7,500
2. Cotton	25,000	Yard	1,65,00,000
		Pond of Yarn	3,00,000
3. Wollen Textiles	1,500	Pound	1,25,000
4. Hosiery	1,000	Dozen	60,000
(D) *Chemical*			
1. Soap	3,000	Ton	22,500
2. Paint & Varnish	1,000	—	—
3. Cement	23,400	Ton/Year	60,000
(E) *Mines*			
1. Mines & Minerals	3,000	—	—
(F) *Engineering*			
1. Auto Machanic Workshop	3,000	—	
2. Foundries	600	Ton	7,500
(G) *Leather Works*			
1. Leather Works	3,000	Pairs of Shoes	2,000
		Sheet of Leather	71,500
(H) *Hotel*			
1. Hotel Project	42,000	Number of Rooms	300
(I) *Miscellaneous*			
1. Cold Storage	2,000	Ton	3,000
2. Electric Goods	850	Dozens	4,20,000
3. Miscellaneous	14,200	—	—

Table No. 9

Use of Fertilizer
(*Area in Hectares*)

District	*Paddy*	*Maize*	*Sugarcane*
1. Kapilvastu	2,000	...	...
2. Kailali	6,000	...	...
3. Jhapa	5,000	...	...
4. Sunsari	1,000	...	...
5. Mahottari	5,000	...	...
6. Dhanukha	10,000	...	...
7. Bara	4,000	...	...
8. Persa	4,000	...	...
9. Morang	3,000	...	...
10. Chitaun	2,000	...	...
11. Rautehat	2,000	...	...
12. Rupendehi	2,000	...	...
13. Kathmandu	2,000	...	...

Table No. 8

Use of Improved Seed

(Area in Hectares)

District	Paddy	Maize	Sugarcane
1. Morung	24,000	...	...
2. Saptari	25,000	...	647
3. Siraha	25,000	...	...
4. Sunsari	20,000	...	...
5. Mahottari	20,000	...	...
6. Sarlahi	15,000	...	...
7. Bara	8,000	...	2,000
8. Persa	8,000	...	1,033
9. Rautehat	20,000	...	...
10. Chitaun	2,000	35,000	...
11. Parasi	4,000	...	...
12. Rupendehi	8,000	...	1,353
13. Kapilvastu	8,000	...	812
14. Banke	3,000	1,400	...
15. Kailali	2,000	2,000	...
16. Kathmandu	3,000	2,000	—
17. East No. 1	1,000	...	...
18. Jhapa	3,000	...	...
19. Pokhara Kaski	1,000	...	...
20. Makawanpur	—	1,200	...
21. Dhading	...	2,000	...
22. Tanhau	...	1,200	...
23. Gorkha	...	1,000	...
24. Kaski	...	1,000	...
25. Baglung	...	2,500	...
26. Palpa	...	4,000	...
27. Dang Deokhuri	...	2,500	...
28. Piutahn	...	2,500	...
29. Sallyan	...	2,000	...
30. Doti	...	1,000	...
31. Berdia	...	2,000	...
32. Kanchanpur	...	1,000	...
33. Sindhu Palchowk	...	2,000	...
34. Kabhre Palchowk	...	3,000	...
35. Dhankuta	...	2,500	...
36. Terhthum	...	4,000	...
37. Ramechhap	...	1,500	...
38. Lalitpur	...	1,500	...
39. Bhaktapur	...	1,500	...

26.	Palpa	2,208	3,800	...	...	...	...	...
27.	Gulmi	355	200	...	...	...	...	...
28.	Baglung	250	300	...	...	...	...	...
29.	Jhapa	17,305	...	...	...	...	4,000	...
30.	Biratnagar	20,720	...	...	...	...	...	...
31.	Saptari Siraha	6,617	...	...	...	5,000	1,500	...
32.	Mahottari Dhanukha	27,258	...	...	...	45,000	...	...
33.	Sarlahi	6,910	...	...	...	4,000	...	900
34.	Bara	8,156	...	...	...	...	...	500
35.	Persa	10,337	...	...	...	...	...	500
36.	Rautehat	8,696	...	...	...	...	...	...
37.	Sindhuli	480	1,000	...	...	...	...	...
38.	Udaipur	480	...	...	...	...	...	...
39.	Kanchanpur	6,550	200	500	...	...	...	...
40.	Banke	6,706	600	5,000	...	...	...	1,000
41.	Berdia	3,226	600	600	...	...	...	...
42.	Kailali	5,160	200	...	...	...	...	...
43.	Kapilvastu	1,583	...	...	...	...	...	1,000
44.	Rupendehi	19,048	...	...	...	...	...	800
45.	Chitwan	5,378	3,500	3,000	...	...	...	...
46.	Nawal Parasi	910	...	1,300	...	...	...	...
47.	Dang Deokhuri	1,231	600	1,500	...	...	...	...
48.	Dhankuta	...	2,000	...	500	...	...	...
49.	Lalitpur	...	250	...	...	...	...	...
50.	Bhaktapur	...	150	...	...	...	...	...
51.	Udaipur	...	1,000	...	...	...	...	...
52.	Morang Sunsari	...	...	...	...	...	4,000	600
53.	Inner Terai	...	...	...	...	...	1,000	406
54.	Pachthar	...	...	...	...	500	...	...
55.	Palpa	...	...	...	...	500	...	...

Table No. 16

Number of persons Trained Within Nepal, within Three Year Plan period.

Subject	*1962-63*	*1963-64*	*1964-65*	*Total*
AGRICULTURE				
JTA Diploma	171	79	65	315
Stockman and Supervisor	15	60	80	155
FOREST				
Ranger	24	22	22	68
Forestor	40	40	33	113
ENGINEERING				
Overseer, Draftsman	40	50	40	130
Nurse and Midwife	12	36	36	84
Health Assistant	66	66	29	161
EDUCATION				
Primary Teacher	435	188	464	1087
Secondary Teacher	38	38	37	113
COTTAGE INDUSTRY				
Cottage Industry Trainees	124	1015	247	1386
PANCHAYAT				
Panchayat Worker	728	351	602	1681
Woman worker	—	32	32	64
COOPERATIVE				
Cooperative Officer	21	60	124	205

Table No. 17

Nepalese Studying Under Scholarship Grants by 1964

	Subject	*1962-63*	*1963-64*	*1964-65**	*Total*
1.	Engineering	73	78	98	249
2.	General Education	68	90	132	290
3.	Health	46	45	26	117
4.	Industry	34	32	4	70
5.	Agriculture	44	31	31	106
6.	Aviation	20	17	3	40
7.	Forestry	6	7	5	18
8.	Costom & Tax	19	14	1	34
9.	Administration	12	24	—	36
10.	Arts	4	2	—	6
11.	Police	4	2	—	6
12.	Tourism	4	1	1	6
13.	Communication	3	1	1	5
14.	Mining	3	3	—	6
15.	Survey & Statistics	3	4	—	7
	TOTAL	343	351	302	996

* By December 1964.